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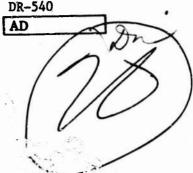
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July 1970 DR-540



METEOROLOGICAL DATA REPORT

ATHENA V-123-D, FLIGHT 122 (11 July 1970)

BY

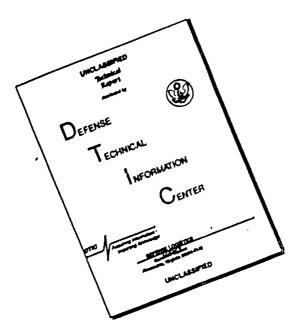
JOHN M. SHARPE



ATMOSPHERIC SCIENCES LABORATORY WHITE SANDS MISSILE RANGE, NEW MEXICO

# UNITED STATES ARMY ELECTRONICS COMMAND

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#### METEOROLOGICAL DATA REPORT

ATHENA V-123-D, FLIGHT 122 (11 July 1970)

Ву

John M. Sharpe

DE-540

July 1970.

DA Task 1T665702D127-02

ATMOSPHERIC SCIENCES LABORATORY WHITE SANDS MISSILE RANGE, NEW MEXICO

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#### ABSTRACT

Meteorological data gathered for the launching of Athena Flight 122, Vehicle V-123-D, are presented for the Air Force Space and Missile Systems Organization and for ballistic studies. The data are presented in tabular and figure form.

#### 

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	ION
DISCUSS	ION
REFEREN	CES
FIGURES	
L. Vel	ocity Vector Data
CABLES	**************************************
<sup>23</sup> 1.	Theoretical Rocket Performance Values
II.	Sample Format for data appearing in Tables III through XI
ile s	Actual and Predicted Launch and Impact Data
	Wind Profile and Impact Displacements
III.	Actual and Predicted Launch and Impact Data (Traj. 1)
	Wind Profile and Impact Displacements (Traj. 1)
IV.	Actual and Predicted Launch and Impact Data (Traj. 2)
	Wind Profile and Impact Displacements (Traj. 2)
v.	Actual and Predicted Launch and Impact Data (Traj. 3)
٧.	Wind Profile and Impact Displacements (Traj. 3)
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VI.	Actual and Predicted Launch and Impact Data (Traj. 4) Wind Profile and Impact Displacements (Traj. 4)
VII.	Actual and Predicted Launch and Impact Data (Traj. 5) Wind Profile and Impact Displacements (Traj. 5)
	wind Profile and impact Displacements (Iraj. 5)
VIII.	Actual and Predicted Launch and Impact Data (Traj. 6)
	Wind Profile and Impact Displacements (Traj. 6)
IX.	Actual and Predicted Launch and Impact Data (Traj. 7)
	Wind Profile and Impact Displacements (Traj. 7)
x.	Actual and Predicted Launch and Impact Data (Traj. 8)
45,	Wind Profile and Impact Displacements (Traj. 8)
VT	Annual and Dunddanad Laurah and Tarant Dana
XI.	Actual and Predicted Launch and Impact Data (Post Shoot Composite)
	Wind Profile and Impact Displacements
	(Post Shoot Composite)
XII.	Second-Stage Impact Data

#### CONTENTS

	PAGE
XIII.	Green River Complex Surface Observations made at 0240 MDT 26
XIV.	Rocket, Raob and Rawin Wind Data 28
xv.	Green River Significant Level Data (Release Time: 2310 MDT)
XVI.	Green River Upper Air Data (Release Time: 30
xvII.	Green River Mandatory Levels (Release Time: 2310 MDT)
xviii.	Green River Significant Level Data (Release Time:
XIX.	Green River Upper Air Data (Release Time: 0255 MDT) 38
xx.	Green River Mandatory Levels (Release Time: 1 18 19 19 19 19 19 19 19 19 19 19 19 19 19
xxI.	Jallen Significant Level Data (Release Time: 0240 MDT)
XXII.	Jallen Upper Air Data (Release Time: 0240 MDT)
XXIII.	Jallen Mandatory Levels (Release Time: 0240 MDT)
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developed by

Athena Flight 122, Vehicle V-123-D (ASO5), was fired from Green River, Utah, Launcher Number 417, at 0240 hours 00.295 seconds MDT, 11 July 1970, by the Atlantic Research Corporation for the Air Force Space and Missile Systems Organization.

Launcher settings, along with other desired trajectory information, were derived by the Meteorological Support Technical Area of the Atmospheric Sciences Laboratory (ASL) by using real-time meteorological data from the Green River, Utah, Complex and the 5-D trajectory simulation computer program developed by ASL, White Sands Missile Range (WSMR), New Mexico. Ballistics Meteorologists at Green River and at the WSMR computer monitored and verified the input and output data. Recommended launcher settings, trajectory data and other information were transmitted to the range and project personnel as required. The Ballistics Meteorologists for this firing were Gordon L. Dunaway at Green River and John M. Sharpe at WSMR.

SVIL DIWS: NIT TO I

#### **DISCUSSION**

The Real-Time Meteorological System (1, 2) developed by Atmospheric Sciences Laboratory for Athena impact predictions was used for this firing.

The real-time system as used on this firing consisted of the following components:

- a. A 500-foot meteorological tower with wind measuring instruments at six levels and 90-foot pole with instruments at two levels.
- b. Automatic pilot-balloon wind measuring systems (3, 4) utilizing a T-9 radar for measurement of the winds from 500 to 10,000 feet above the surface.
- c. The AN/GMD wind-measuring system (rawin), monitored by the MPQ/12 radar, for measuring the winds from 10,000 to 100,000 feet.
  - d. The meteorological rocket for measuring winds above the rawin level.
  - e. A high-speed digital computer.

All Green River wind data in this report are oriented with respect to the nominal 151.2° firing line to White Sands Missile Range. This presents a more accurate head, cross, or tail wind. Positive Range component values are oriented to 331.2° True North, and positive Cross component values are oriented to 61.2° True North. Wind direction and speeds for Green River have the same orientation, with 360° representing 331.2° True North.

All wind data not taken at Green River are referenced to True North (TN).

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  Rep. No ECOM-5196, U. S. Army Electronics Command,
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SAPTER FORMER FOR DATA APPRARIAGING IN TABLES III TEROUGH II

cine of sumputation 3-D trajectory (Greenwich ......

#### 0.00 0.00 (ESITE TABLE I)

#### THEORETICAL ROCKET PERFORMANCE VALUES

#### ATHENA -D- CASE 32372 MAX RANGE MAY 1970

	В	ALLISTIC FACTO	RS	osac.		VELOC	ITY VECTORS	(GEODETIC)
	_			.DEEC.		LING AUT,	(WITH SPIN E	FFECT)
ALTITUDE	B.F.	ALTITUDE	B.F.	76	1189) 1283)	ER ATUTATA)	TOTTEMENTEE	MEACT CHAI
4460- 4515	.0248	11K-13K	.0322	000.0	TIME	ALTITUDE	ALPRA	THETA
- 4549	.0302	741 MI -15K	.0252	Det	.530	4492	152.200	72.000
- 4593	.0329	-17K	.0192	RCRT BO	2.483	5089	151.947	70.177
- 4639	.0297	-19K	:0150		5.530	6713	151.542	66.603
- 4701	.0356	-21K	.0120		10.530	10838	151.354	62.384
- 4789	.0476	-23K	.0098		15.530	16619	151.409	59.034
- 4873	.0373	-25K	.0083		20.530	24208	151.462	56.328
- 4968	.0393	-30K	.0159		25.530	33955	151,514	54.146
- 5100	.0487	-35K	.0115		30.530	46226	151.565	52.376
- 5200	.0317	-45K	.0111		35.530	59334	151.618	50.698
- 5300	.0302	-55K	.0030		40.530	71850	151.669	48.918
- 5400	.0240	-65K	.0011	CSRT BO	41.001	72984	151.674	48.742
- 5500	.0237	-75K	0005		44.300	80694	151.706	47.474
- 5750	.0483	-85K	0019		45.530	83469	151.717	46.983
- 6000	.0400	-95K	.0083	2ND IGN	46.025	84570	151.720	46.782
- 6250	.0342	-105K	.0058	4.	50.530	94993	151.739	45.024
- 6500	.0287	-115K	.0052		55.530	107893	151.755	43.277
- 7000	.0471	-135K	.0072		60.530	122492	151.766	41.742
- 7500	.0379	-155K	.0047	47	65.530	139065	151.768	40:403

#### UNIT WIND EFFECTS

-10000 .0312

-11000 .0235

- 8000

- 9000

.0309

.0437

### NOMINAL IMPACT

BALLLISITE DISPIACEMENTS C.C UCT BUMAN \*

WOIT

RANGE = .53885 CROSS = 5.3911

FIRST STAGE X = 122609 FT = 23.2221 MI

157754

178712

201862

204159

151.768

151.769

151.792

151.794

39.227

38:192

37:268

37.181

Y = -232893 FT = 44.1098 MI

RANGE = 263195 FT = 49.8476 MI

NOMINAL LAUNCHER SETTINGS

SECOND STAGE

65.530

70.530

80.530

.0000 2ND BO 81.015

75.530

X = 1054725 FT = 199.7585 MI

GEOCENTRIC GEODETIC ALPHA = 151.927 ALPHA - 152.200

TR IS! - TEL HA

-175K .0030

.0028

.0002

-195K

-215K

-235K

Will a TH

Y = -2101586 FT =-398.0277 MI

THETA = 72.167THETA - 72.000 RANGE = 2351406 FT = 445.3420 MI

TOWER TILT = 1.083 MI/DEG

ATAC TUATRI LA R

#### SAMPLE FORMAT FOR DATA APPEARING IN TABLES III THROUGH XI

	กบุน	iber		time of	compu	tation 5-	D traj	jectory (Greem	vich me	an time	)
	TRAJ.	0.0 T	IME	00.0	00.	0					
		DISPLACEME	NTS		(ST	ATUTE MIL	ES)				
*	RANGE	TOW 0	.0	PIS	0.	O UP		0.0 TOTAL	0.0	1-BST	0.0
	CROSS		.0	PIB	0.			0.0 TOTAL	0.0	1-BST	0.0
	LAUNCH ANG	LES			`						
	HTUMISA	000.0DE	GS	00.0MINS		00.0SEC.		To Stell 101			
	ELEVATION	00.0DE	GS	00.0MINS		.OSEC.		obset.			
			aa (a <b>a</b> )		a <b>\</b>						
	IMPACT CHA	RACTERISTI	CS (STA		-	P41				- :	
	100	X	00.0	Y	DX	DY					
**		00.000	-00.0		000	0.000		GT41165 EV 516	t de la constant	W MANTE	1 ÷
	2ND	000.000	-000.0		000	000	4	CHANGE IN IMP	ACT PRO		BL
	PIP	0.000	0.0	00	1			DANCE ON W. WA	C FF.	Letta	
			4/2	<b>55.</b>				RANGE OR Y VA		The second secon	
	MARK IX	PREDICT		TRAJECTO						ALUES A	
	TIME		AZ		EL					OR EAST	
	.5	0.00		00.0				DESIGNATED BY			
	2.5	000.0		00.0			1.5	SOUTH OR WEST			
	5.5	000.0		00.0	1			VALUE).	1 111		
	10.5	000.0		00.0				7 . 4	TILO.	11176	
	15.5	000.0		00.0				.3."	\$650.		
	20.5	000.0		00.0		TACTER IN	COMOR		4		-
	25.5	000.0				LOCITY VE	CTORS	A 7	Titte.		
	30.5	000.0	/		00				e it	The same	
	35.5	000.0		00.0		3 00		10_	(:21),		
	40.5	000.0		00.0				J - 6	-710	et et	
	41.0	000.0		00.0					71 2 1	* • 54	
	44.3	000.0		00.0							
	45.5	000.0		00.0				4 . 4		F 1	
	46.0	000.0		00.0							
	50.5	000.0		00.0			0.5				
	55.5	000.0		00.0						S. 1.1	
	60.5	000.0		00.0							
	65.5	000.0		00.0			-	* TOW = TOWER			
	70.5	000.0		00.0			_	PIB = PIBAL	_ = Mi		
	75.5	000.0		00.0				UP = UPPER			
	80.5	000.0		00.0				TOTAL			
	81.0	000.0		00.0				1-BST = 1st	CTACE		
	110.0	000.0		00.0				1-031 - 186	SIAGE		
	110.1	000.0		00.0				ቀ 1 <i>0</i> ጥ <sub>—</sub> 1 <i>0</i> ጥ <i>0</i> ጥ	ACE		
	238.6	0000		00.0			~	* 1ST = 1ST ST. 2ND = 2ND ST.			
	476.7	000.0		00.0						A COT	
	542.7	000.0		00.0				PIP = PARACH	OIE TM	MCI	
	100.0	000.0		00.0							
	298.0	000.0		00.0							
	100.0	000.0		00.0							
	298.0	000.0	00	00.0	IUU						

TABLE II. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA

## SAMPLE FORMAT FOR DATA APPEARING IN TABLES

		SAMPLE FOR	MAT FOR	DATA A	PPEARING 1	IN TABLES		
		ATAG	規制自由	MUHAL!	a GILDINA	Mit OMA TAUT		TRAT
	MEAN (FT)	A(D)	S(K)	o R		THE STATE OF THE S		
	4504.0	0.0	0.0	0.0	0.0	RANGE	CROSS	
	4531.5	0.0	0.0	0.0	0.0	0.0	0.0	
	4570.5		0.0	0.0	0.0	0.0	0.0	
	4615.5	azimuth	0.0	0.0	0.0	0.0	0.0	
	4669.5	(degrees)		0.0	. 20.06.5			
	4744.5	0	0.0	0.0	0.0	range and		a to More
One of	4830.5	0.0	0.0	0.0	0.0	displace	ents du	<b>B</b>
4 3 %	4920.5	0.0	0.0	0.0	0.0	to the wi		
layer mid	5034.3	0.0	0.0	0.0	0.0	statute n	illes	PLEAT & I
point	5150.0	0.0	0.0	0.0	0.0	50.00 .041	THE STA	1 1/84
(feet above	5250.0	0.0		0.0	0.0	0.0	0.0	
sea level)	5350.0	0.0	speed	0.0	0.0	0.0	0.0	- 0 4
\$-740	5450.0	0.0	(knots)		0.0	0.0	0.0	
	5625.0	0.0		0.0	0.0.	0.0	0.0	1 d
	5875.0	0.0	0.0	0.0	0.0	0.0	0.0	23 3
	6125.0	0.0	0.0	0.0	0.0	0.0	0.0	1
	6375.0	0.0	0.0	0.0	0.0	0.0	370.0	2.
	6750.0	0.0	0.0		0.0	0.0		ie i i
	7250.0	0.0	0.0	range	0.0	0.0	0.0	
	7750.0	0.0	0.0	wind	0.0	0.0	0.0	
	8500.0	0.0	0.0	(miles		0.0	0.0	
	9500.0	0.0	0.0	per .	0.0	0.0	0.0	200
	10500.0	0.0	0.0	hour)	0.0	0.0	0.0	
	12000.0	0.0	0.0		0.0	0.0	0.0	
	14006.0	0.0	0.0	0.0	0.0	0.0	0.0	
	16000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	18000.0	0.0	0.0	0.0		0.0	0.0	
	20000.0	0.0	0.0	0.0	cross	0.0	0.0	
	22000.0	0.0	0.0	0.0	wind	0.0	0.0	
	24000.0	0.0	0.0	0.0	(miles	0.0	0.0	
	27500.0	0.0	0.0	0.0	per	0.0	0.0	
	32500.0	0.0	0.0	0.0	hour)	0.0	0.0	
	40000.0	0.0	0.0	0.0		0.0	0.0	
	50000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	60000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	70900.0	0.0	0.0	0.0	0.0	0.0	0.0	
٤	0.0008	0.0	0.0	0.0	0.0	0.0	0.0	
	90000.0	0.0	0.0	0.0	0.0	0.0	0.0	
f	100000.0	0.0	0.0	0.0	0.0	0.0	0.0	
ľ.	110000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	125000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	145000.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ÿ.	165000.0	0.0	0.0	0.0	0.0	0.0	0.0	
•	185000.0	0.0	0.0	0.0	0.0	0.0	0.0	1 1 1 1 1 1 1
+	205000.0	0.0	0.0	0.0	0.0	0.0	0.0	- 1
	225000.0	0.0	0.0	0.0	0.0	0.0	0.0	
	245000.0	0.0	0.0	0.0	0.0	0.0	ö.ö	

## TABLE III. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA ATHENA FLIGHT 122

```
(C)A
                                               MEAN (FT)
             1 1/2
                                             0,205,6
                               0,0 0,0
                      Dir GLA
                                                4531.5
                                                6.0186
                                     diumise
                                                 4,6934
TRAJ. 1 2000 M. TIMES
                    7.0 33.9
                                 (degrees) 0 0
 BALLISTIC DISPLACEMENTS (MILES)
                                UP -1.4 TOTAL
 RANGE TOW D.O. PIBO. - .90.0
                                               -2.3 1-BST -1.7
 CROSS
        TOW -1.1
                                UP -4.0 TOTAL -31.1 1-BST -41.1
                   213 -26.0
LAUNCH ANGLES
                                 15.2SEC.
                                                0.0812
                      7.0MINS
    AZIMUTH 148.0DEGS
                                                            takog
                                                 5250.6
  ELEVATION
                     43.0MINS
             72.ODEGS
                                   43.6SEC.
                                                          feet above
                                                 5350.0
IMPACT CHARACTERISTICS (MILES)
                                                          (Invel see
                                (sound) DX
                                                 0.0200
                                         0.0
      J.
               X
                           Y
                                                DYaraa
                     -43.7010.0
                                 -1.643
                                         0.0
 13T
           21.529
                                               .368
                                        0,0
                    -396.796
2ND
          198,070
                                  -1.689
                                              1.2323012
                       0.000
                                         0.0
 PIP
          0.000
                                 0.0
                                            6375:0
                                         0.0
      PREDICTED
                  TRAJECTORY
                                         0.0
                                                 6730.0
                                  0.0
                      72.729
 TIME 0.0 AZ
                                 0.6
                                                 7250.0
  .5 0.0
          148.121
                      71.035
  2.5 0.0
          147.976
                      67.353
                                                 0.0028
  5.5 148.372
                      63.196
59.656
                                                 9300.0
 10.5 0.0
          150.164
                                                 0.00200
 15.5 ... 151.174
                                                 U.00011
 20.5 151.968
                      56.719
54.478
52.598
 25.5 152.634
 30.5 153.006
                      50.911
 35.5 153.058
                      49.134
48.960
 40.5
     153.112
 41.0
      . 153.117
                      47.695
                                         0.0
 44.3
      153.155
                      47.205
 45.5
          153.168
                      47.005
 46.0
      153.171
 50.5
      153.048
                      45.183
 55.5
      152.880
                      43.331
 60.5
         152.691
                      41.806
 65.5
         152.481
                      40.401
                     39.143
 70.5
      152.284
 75.5
      152.075
                      38.074
 30.5
      151.910
                      37.121
 81.0
         151.912
                      37.034
110.0
         152.028
                      31.466
         152.018
110.1
                      31.445
233.6
       152.260
                      -1.073
476.7
         145.291
                    -80.271
542.7
         347.642
                    -82.456
100.0
         153.616
                      4.747
298.0
         24.763
                     -87.318
100.0
         153.234
                     4.764
298.0
         340.145
                    -89.248
```

#### TABLE III. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS ATHENA FLIGHT 122

8.1 . - - 3.1 5

MEAN(FT) A(D)	SCR) TOATMIREM HOCA	DANCE COOK
4504.0 209.6	2.0 -2.0 -1.1	NAMEE CHUS
4531.5 226.5	.544	0.0 -1 - 4
4570.5 244.7		0.01
4615.5 346.0		0.01
4659.5 340.6		•1 - •3
4744.5 195.6	3.8 4.2 -1.5	•1 - •3
4830.5 196.6	1.7 -1.95	0.01
4920.5 177.0	1.6 -1.75	0.0
	101.9 -1-2.2 1	0.0 0.0
		.1
	1.4 -1.63	0.01
5250.0 219.2	A 2 2 2 4 1 5 7 30 16 11 11 11 11 11 11 11 11 11 11 11 11	0.0 -3
5350.0 231.3	3.4 -2.4 -3.0	0.0
5450.0 234.9	3.8 -2.5 -3.6	20.0 12.5 15 15 15 15 15 15 15 15 15 15 15 15 15
5625.0 239.3	4.5 -2.6 -4.4	1 -1-1
5875.0 251.5	6.1 -2.2 -6.7	0.0 -1.4
6125.0 256.9	8.2 -2.1 -9.1	i • n • n • • • • • • • • • • • • • • •
6375.0 260.1	9.3 -1.8 -10.5	0.0 -1.60
6750.0 264.5	12.0 -1.3 -13.9	0.0 -3.5
7250.0 264.2	14.5 -1.7 -16.6	0.0 -3.4
7750.0 269.3	14.72 -17.0	
850010 0.0	00 00 00	
9500.0 251.2	15.8 -5.9 -17.2	0.0 0.0 *
10500.0 241.0	12.5 -7.0 -12.6	
12000.0 232.3	13.7 -9.6 -12.5	
14000.0 242.3		2 -2.2
16000.0 230.0	18.6 -9.9 -18.9	1 -2.6
18000.0 230.0	21.0 -15.5 -18.5	
20000.0 230.0	24.0 -17.8 -21.2	1 -1.7
22000.0 230.0	25.0 - 18.5 - 22.1	1 -1.4
24000.0 250.0	29.0 -21.5 -25.6	1 -1.4
24000.0 260.0	23.0 -4.6 -26.1	0.0 -1.2
27500.0 260.0	25.0 -5.0 -28.4	0.0 -2.4
32300.0 250.0	31.0 - 12.2 - 33.5	1 -2.1
40000.0 230.0	33.0 -24.4 -29.1	1 -1.7
50000.0 170.0	12.0 -13.6 2.4	0.0 0.0
60000.0 130.0	12.0 -8.9 10.6	0.0 .1
70000.0 130.0	15.0 -11.1, 13.2	0.0 0.0
80000.0 130.0	22.0 -16.3 19.4	0.02
90000.0 135.0	29.0 -23.6 23.6	_
100000.0 125.0	33.0 -21.8 31.1	
	33.0 - 13.0 35.7	
	50.0 -24.3 52.2	
	76.0 -61.9 61.9	1 2.0
		2 1.6
		0.0 1.3
		1 1.9
		0.0 .1
	80.0 -59.2 70.6	0.0 0.0
5420000 130.0	80.0 -59.2 70.6	0.0 0.0

<sup>\*</sup> data missing due to operational technicality

```
ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA
ATHENA FLIGHT 122
 TABLE IV.
             ATHENA FLIGHT 122
                                                                  4531.5 226.5
                                                                 4575.5 244.7
                             7.0 48.7
                                                         4669.5 540.6 5.E
                   TIME
TRAJ. 2
 BALLISTIC DISPLACEMENTS (MILES)
                                              UP -1.7 TOTAL -2.6 1-BST -2.1
UP -4.7 TOTAL -42.1 1-BST -52.6
         TOW 0.0 PIB -.9
TOW -2.7 PIB -34.7
 RANGE
                  -2.7
 CROSS
LAUNCH ANGLES
                                38.0MINS 19.8SEC. 8.818 0.0883
49.0MINS 16.5SEC. 8.818 0.0883
      AZIMUTH 146. ODEGS
    ELEVATION 72.0DEGS
ELEVATION 72.0DEGS 45.001103

IMPACT CHARACTERISTICS (MILES)

X Y DX

1:3T 21.636 -43.657 -1.536

2ND 198.988 -396.380 -.771

PIP 0.000 0.000

PREDICTED TRAJECTORY

TIME A7 FL
                                                2.0 DX 5.865 0.0086
-1.536 6.0411.0180
                                                                 6. 1.411 . CTRC
                                                                 0.1.647
                                                                 6375. 260.1
                                 72.821 7.12 C.11
71.096 C.1
                     AZ
                                                                 3.230.0.062F
              AZ
146.639
146.382
147.405
150.004
150.967
151.769
152.465
152.946
153.029
153.079
153.085
    .5
                               71.096
67.570
63.404
59.366
56.926
54.504
52.559
50.868
49.090
48.915
47.649
47.159
46.958
45.147
    2.5
                                                                 6.0 C.000's
    5.5
   10.5
                                                                  0.198 0.00 CCI
   15.5
                                                                 8.945 0.00091
8.945 0.000A1
  20.5
  25.5
                                                                 0.000 0.0000
  30.5
  35.5
  40.5
              153.085
153.123
153.135
                                                                  6.031 0.130A0
0.030 0.00319
0.030 0.00318
  41.0
  44.3
  45.5
  46.0
               153.138
  50.5
               153.006
                                43.418
  55.5
               152.753
  60.5
               152.576
  65.5
               152.366
                                 40.438
  70.5
               152.168
                                 39.181
                                 38.114
  75.5
               151.957
  30.5
               151.793
                                 37.161
                                37.073
  81.0
               151.795
 110.0
               151.912
                                 31.510
 110.1
               151.901
                                31.488
233.6
               152.144
                                -1.025
476.7
               138.139
                               -80.335
544.7
              349.985
                               -82.168
100.0
              153.614
                                4.741
293.0
               29.097
                               -86.865
100.0
              153.201
                                4.747
298.0
              340.106
                               -89.247
```

TABLE IV. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS
ATHENA FLIGHT 122

	48444834			1						
	MEAN (FI)			R		RANGE	CROS			
	4504.0			.2		0.0	4			
	4531.5			2.3	8	0.0	1			
	4570.5	297.4	1.3	.7			2			
	4615.5	298.1	1.4				2	5		A . T
	4669.5			.2			- 4			
	4744.5					0.0	2 7			
3 9	4830.5			-1-1	-1.4			E C L M	6	- 1 pa
	4920.5	020 0	1.00	7,404	-1.4		3			- 5 1
	5034.3	230.2		9			3	7 (1 Th M to 1 L 1		
				1 1.65			-1.4	26 12		
	5150.0		W end o	-			5	A 8 - 9		
	5250.0	257.9	2.2	5	-2.5	0.0	4	و الملك		
	5350.0	245.4	3.2	-1.5	-3.4	0.0	4			
	5450.0	252.4	4.0	-1.4	-4.3		6	4		
	5625.0	249.8	4.3		-4.7		-1.2	W .		
	5375.0	259.3	8.1	-1.7			-2.0			
	6125.0	269.1	7.7		-8.8		-1.6	÷ .		
	6375.0	269.1	11.2		- 12 .8		-2.0	-		
			13.3	- • G	- 16 7					
	7250.0	265 4	17.9	- 1 6	-12.3	0.0	-3.9			
	7750.C				-20.6	77.54	-4.2			
				-2.8	-18.7		-3.1			
	8500.0			-5.2	-18.4		-4.3			
	9500.0				-16.3		-2.7			
	10500.0				-12.6		-1.6			
	15000.0				-11.7	2	-2.0			
	14000.0	241.4	20.2	-11.1	-20.4	2	-2.8			
	16000.0	230.0			-18.5		-1.9			
	0.00081	230.0			-21.2					
	20000.0				-22.1	•	-1.4			
	22000.0				-25.6					
	24000.0				-25.6		-1.4			
	27500.0				-28.2		-1.1			
	32500.0						-2.4			
			45.0	-33.3	-39.7		-2.5			
	40000.0	230.0	45.0	-33.3	-39.7	2	-2.4			
	50000.0	230.0	20.0	- 14 .8	-17.6	0.0	3			
	60000.0	120.0	12.0			0.0	• 1			
	70000.0		12.0	-6.9	12.0	0.0	0.0			
	80000.0	130.0	19.0	-14-1	16.8	0.0	2			
	90000.0	135.0	29.0	-23.6	23.6	1	1.1			
	0.000001	74.8	45.4		50.4	0.0	1.6			
	110000.0	110.0	33.0		35.7	0.0				
	125000.0	115.0	50.0		52.2		1.0	1		
	145000.0	135.0	76.0			1	2.0			
	65000.0	110.0			61.9	2	1.6			
	85000.0		74.0		80.1	0.0	1.3			
		105.0	116.0		129.0	1	1.5			
	205000.0	130.0	86.0 -		75.9	0.0	• 1			
	25000.0	130.0	80.0		70.6	0.0	0.0			
2	245000.0	130.0	80.0	.59.2	70.6	0.0	0.0			

ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA ATHENA FLIGHT 122

```
TRAJ. 3
                     8.0
              TIME
 BALLISTIC DISPLACEMENTS (MILES)
       TOW .2 PIB -1.1 UP -1.7 TOTAL -2.6 1-BST -2.0
 RANGE
 CROSS
         TOW -1.5
                   PIB -35.5 UP -6.6 TOTAL -43.6 1-BST -53.6
LAUNCH ANGLES
     AZIMUTH 146.ODEGS
                         25.0MINS 50.1SEC.
   ELEVATION 72.0DEGS 49.0MINS
                                     9.8SEC.
IMPACT CHARACTERISTICS (MILES)
                                DX
                                                 DY
 1ST
            21.645
                      -43.479 -1.528
                                                 .589
2ND
           198.253
                      -396.336
                                 -1.505
                                                 1.691
 PIP
             0.000
                         0.000
                                  7 4 1 -
         PREDICTED
                   TRAJECTORY
 TIME
               AZ
                           EL
  .5
           146.431
                       72.819
  2.5
           146.296
                       71.148
  5.5
           146.943
                       67.542
 10.5
           149.743
                       63.411
 15.5
          150.808
                       59.837
 20.5
          151.663
                       57.001
 25.5
          152.470
                       54.599
 30.5
          152.953
                       52.657
 35.5
          153.036
                       50.969
 40.5
          153.086
                       49.194
 41.0
          153.093
                       49.019
 44.3
          153.131
                       47.754
 45.5
          153.143
                       47.265
 45.0
          153.146
                       47.065
 50.5
          153.024
                       45.244
 55.5
          152.856
                       43.443
 60.5
          152.666
                       41.869
 65.5
          152.456
                       40.465
 70.5
          152.258
                       39.207
 75.5
          152.048
                       38.139
 80.5
          151.884
                       37.186
 81.0
          151.885
                       37.099
110.0
          152.002
                       31.534
110.1
          151.991
                       31.512
238.6
          152.235
                       -1.021
476.7
          133.102
                      -80.372
544.7
          351.387
                      -82.133
100.0
          153.588
                       4.821
298.0
          33.757
                      -86.782
100.0
          153.210
                       4.837
297.0
```

-89.248

340.124

(CONT) WIND PROFILE AND IMPACT DISPLACEMENTS TABLE V. ATHENA FLIGHT 122

1.5-

```
R C RANGE ....

-1 -1 -0.0 0.0

-5 -3 40.0 70.0

-5 -4 100.0 70.0

8.91 -2.4 - 11 - 4

-1.5 0.0 -4

-1.5 0.0 -4

-1.5 0.0 -4
     MEAN (FI)
                A(D)
                       S(K)
       4504.0 230.2
                      .2
       4531.5 331.8
                        .5
       4570.5 322.3
                        .6
      4615.5 345.1 8.0 18.9 -2.4
4659.5 337.9 4.6 4.9 -2.0
4744.5 247.4 1.4 -.6 -1.5
                             -.6
                       1.2 . 5-1.1
                                                age Lat reliables
       4830.5 216.3
       4920.5 197.7
                      1.5 -1.6
                                     PAGE CHARACTER 10.015, 0.015) 2.-
       5034.3 190.4
                        .8
                              -.9
                                    - .3
       5150.0 193.6
                       2.8 -3.1
                                            - . 1
                                                  - . 1
                                           0.0 - 304 . Rei
0.0 - 400 . 0
                                   - .9
       5250.0 194.3
                       3.3 -3.7
                                   -2.10
       5350.0 235.2
                       2.2 -1.4
       5450.0 252.3
                                  -3.2 0.0
                       2.9
                             -1.0
                                                - 1.5jato1 ua qe
       5625.0 245.5
                       5.6
                                   -5.9 9 -.1
                             -2.5
                                  -9.8
                                                -2.1
       5375.0 252.3
                       8.9
                             -3.1
                                            - . 1
                                                -2.1.32.24
                                            0.0
       5125.0 268.4
                              -.3 -11.4
                       9.9
                                                -2.2 AZ. ZAI
       6375.0 278.2
                     12.6
                              2.1 -14.3 0.0
                                                -4.7
-3.9 1 . 6.1
-3.5 77.00
       6750.0 267.5
                      16.2
                              -.8 -18.6 SA.0.0
       7250.0 257.9
                             -4.1 -19.2 2 -11
                       17.1
       7750.0 260.2
                      18.3 -3.6 -20.8 -- 1
                      15.6 -4.3 -17.5
                                                -4.1 20. 17
       8500.0 256.2
                                                -3.3
                            -5.2 -19.5 2 - 1
       9500.0 255.2
                       17.5
                                                -1.8
                      13.4 -6.5 -14.0 -.1
      10500.0 244.9
                                                -2.4
      12000.0 226.6
                       16.4 - 13.0 - 13.7
                                           -.2
                                                -2.8
                      20.1 -10.3 -20.7 -.1
      14000.0 243.6
                                                -2.1
                      20.0 -11.5 -19.9 -.1
      16000.0 240.0
                                                -1.9
                      23.0 -13.2 -22.9
      13000.0 240.0
                                            - . 1
                                                -1.5
      20000.0 240.0
                      24.0 -13.8 -23.9 3 -.1
                                                -1.3
                      28.0 -20.7 -24.7.0 -.1
      22000.0 230.0
                                                -1.4
                      31.0 -17.8 -30.9 -.1
      24000.0 240.0
                                                -3.2
      27500.0 240.0
                      37.0 -21.3 -36.9 - 2
                      45.0 -33.3 -39.7
                                                -2.5
      32500.0 230.0
                                            - .2
                     45.0 -33.3 -39.7
                                            - .2
                                                -2.4
      40000.0 230.0
                     20.0 -14.8 -17.6
                                            0.0
      50000.0 230.0
                                                 - . 3
                      12.0 -6.9 12.0 0.0

12.0 -6.9 12.0 0.0

19.0 -14.1 16.8 0.0

29.0 -23.6 23.6 -.1

33.0 -21.8 31.1 -.1

33.0 -13.0 35.7 0.0

50.0 -24.3 52.2 -.1
      60000.0 120.0
                                                0.0
                                                   • 1
      70000.0 120.0
      80000.0 130.0
      90000.0 135.0
                                                  1.1
     100000.0 125.0
                                                  1.0
     110000.0 110.0
                                                   1.0
     125000.0 115.0
                                                  2.0
                                   61.9
     145000.0 135.0
                      76.0 -61.9
                                            - .2
                                                  1.6
                      74.0 -25.1
                                   80.1
                                            0.0
                                                   1.3
     165000.0 110.0
                     116.0 -34.6 129.0
                                            - . 1
                                                   1.9
     185000.0 105.0
                                   75.9
     205000.0 130.0
                      86.0 -63.7
                                            0.0
                                                   • 1
                                    70.6
     225000.0 130.0
                      80.0 -59.2
                                            0.0
                                                  0.0
     245000.0 130.0
                      80.0 -59.2
                                    70.6
                                            0.0
                                                   0.0
```

TABLE VI. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA (1990) .V SURAT

```
S. 088 0. 601 p
               TIME 8.0 14.4
TRAJ. 4
 BALLISTIC DISPLACEMENTS (MILES)
                -.3 PIB -.9 UP -1.7 TOTAL -2.8 I-DST
-.4 PIB -34.7 UP -6.6 TOTAL -41.7 I-BST
 RANGE
         TOW
CROSS
         TOW
LAUNCH ANGLES
     AZIMUTH 145. ODEGS 41. OMINS 2.7SEC.
                                                    2333.5 215.3
   ELEVATION 72.0DEGS 51.0MINS 42.0SEC.
                                                    1. TE1 6.002A
IMPACT CHARACTERISTICS (MILES)
                                                   a. E. DYLOUIS
                                           DX
                       -43.647 -1.428
-396.802 -1.109
 IST
            21.744
                                                  .421
2ND
            198.549
                                                   1.225
             0.000
215
                         0.000 - -
         PREDICTED TRAJECTORY
                             EL . 2 -
                AZ
 TIME
            146.684
                          72.862
   .5
                                            2.2
                                                  A. 305 C. 8513
                         71.098 - 1.3
            145.358
  2.5
                                                  9.565
                                            3.51
                         67.423.81 - 8. - 9. 8.
63.340.81 - 1.4 - 1.71
59.865.05 - 2.8 - 8.81
            147.150
   5.5
                                                   e. ras c. cera
           149.710
 17.5
                                                   2. TES 0.0687
 13.5
            150.771
                                                   7750.0 260.8
                         56.952
                                            3.21
 20.5
           151.647
                                                   2500.0 256.2
                         54.562 - 8. 6.
                                            200
           152.452
 25.5
                                                   S. 308 0.0000
                         30.5
           152.934
                                                   £. 445 0.0000
                         50.934 - 81 - 0 - 4.01
           153.017
 35.5
                                                   2.335 0.00001
                         49.160.08- 1.01- 1.08
           153.067
 40.5
                         48.985 - 6.11 - 0.08
 41.0
           153.073
                                                   0.048 0.000a
                         47.721-38-
 44.3
           153.111
                         47.232 - 13- 8. 31 - 0. AS
           153.123
 45.5
                         47.032.43- 5.03- 0.65
45.213.06- 3.15- 0.18
43.414.86- 3.15- 0.18
 46.0
           153.126
           153.004
 50.5
 55.5
           152.837
                         41.841.71- 6.06-0.66
 60.5
           152.647
                         $40.437.86~ 6.36- 0.64
 65.5
           152.436
                         39.180-1-8.01-0.00
 70.5
           152.239
                         38.112
 75.5
           152.029
 90.5
           151.865
                         37.150
                                     12.0 - C.SI
1.41 - C.SI
2.0 - C.VS
1.10 - C.VS
1.10 - C.VS
1.40 - C.OS
 81.0
           151.866
                         37.073
                         31.510
110.C
           151.983
110.1
                        31.489
           151.972
                         -1.015
233.5
           152.216
                        80.266
476.7
           138.351
544.2
           351.572
                        -82.22
                         4.914
100.0
           153.566
298.0
           31.382
                        -86.836
100.0
           153.190
                          4.933
293.0
          340.067
                        -89.245
                                                  Cabel C. DATE CO
```

TABLE VI. (CONT) WIND PROFILE AND IMPACT DISPLACEMENT ATHENA FLIGHT 122

0.8.

	2		A FLICHI	122				
MEAN (FT)			THE THE	HOW C	RANGE	CROS	2011	
4504.0		3.3	-3.3	1.9	0.0	•3		
4531.5		2.8	-3.0	1.1	0.0	.2		
4570.5	187.5	2.0	-2.3	3	0.0	1		
4615.5	185.8	2.2	-2.6	3	0.0		3	
4669.5	188.2	, 1 . 7	-2.0	3	0.0	1		
4615.5 4669.5 4744.5 4830.5	195.3	1.1	-1.2	3		1		
4830.5	215.8	1.2	-1.1	8	0.0			
4923.5			-1.7	-1.9	0.0	4		
5034 . 3	190.4	2.2	9	2	0.0	0.0	h +	
5150.0	193.6	2.8	-3.1	8	1	-1.1		
5250.0	194.5	3.3		9		2		
5350.0	236.2	2.2	-1.4	-2.1		3		
5450.0	252.3	2.9	-1.0	-3.2	0.0	4	ra f	
5625.0		5.6	-2.5	-5.9	10 to 10	-1.5	0 1 1	
5875.0		8.9	-3.1	-9.8		-2.1		
6125.0		9.9	3	-11.4	0.0	-2.1		
6375.0	273.5	12.5	.9	-14.3	0.0	-2.2		
\$750.0		12.6	2.1	-14.4		-3.6		
7250.0		10.0		- 19 - 1	0.0	-3.9		
7750.0		20.2	-4.9	-22.6	- 1	-4.3		
8500.0		10.0	-4.9	-18.5 -16.9		-2.8		
9500.0 10500.0	220.2	10.0	-4.1	-13.7	3 49	-1.7		
12000.0								
14000.0		17.0	-10.5	-22.0		-3.0		
16000.0						-1.9		
18000.0				-24.8		-2.0		
20000.0						-1.5		
22000.0		28.0	-20.7	-24.7		-1.3		
24000.0		31.0	-17.8	-30.9		-1.4		
27500.0		37.0	-21.3	-36.9	2	-3.2		
32500.0				-39.7		-2.5		
40000.0		45.0	-33.3	-39.7		-2.4		
50000.0				-17.6		3		
60000.0			-6.9		0.0	• 1		
70000.0	120.0	12.0	-6.9	12.0	0.0	0.0		
80000.0	130.0		-14.1	16.8	0.0	2		
90000.0	135.0		-23.6	23.6	1	1.1		
100000.0	125.0	33.0	-21.8	31.1	- • 1	1.0	•	
110000.0	110.0	33.0	-13.0	35.7	0.0	1.0		
125000.0	115.0	50.0	-24.3	52.2	1	2.0		
145000.0	135.0		-61.9	61.9	2	1.6		
165000.0	110.0			80.1	0.0	1.3		
185000.0	105.0			129.0	1	1.9		
205000.0	130.0		-63.7	75.9	0.0	•1		
225000.0	130.0		-59.2	70.6	0.0	0.0		
245000.0	130.0	80.0	-59.2	70.6	0.0	0.0		

## TABLE VII. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA ATHENA FLIGHT 122

```
TRAJ. 5
             TIME
                    8:0
                       23.1
BALLISTIC DISPLACEMENTS (MILES)
                                UP -1.7 TOTAL -3.6 1-8ST
RANGE
        TOW - .5 ..
                    PI3 -1.4
CROSS
        TOW
             -2.2
                    PIB -35.1
                                UP -6.6 TOTAL -43.8 1-BST -53.8
LAUNCH ANGLES
                        21.0MINS
    AZIMUTH 146.0DEGS
                                    6.OMINS
                                    43. I SEC . . . del e. pele
  ELEVATION 73.0DEGS
IMPACT CHARACTERISTICS (MILES)
                                            DY
               : X
                                     DX
 IST
           21.793
                                -1.379
                      -43.544
                                               .524
2ND
                                --480
          199.278
                     -396.356
PIP
                       -0.000
            0.000
                                1.1- 2.7
                                            7.988 0.888
                  TRAJECTORY
        PRED ICTED
 TIME
                          EL ...
               AZ
   •5
          146.361
                     73.112
  2.5
          146.053
                     71.373
  5.5
          146.985
                       67.508
 10.5
          149.608
                      63.293
                                C. Am
          150.672
 15.5
                      59.817
                                1.1-
 20.5
          151.548
                      56.911
                                E. C.
                                            9. FAS 0. F
 25.5
          152.352
                      54.508
                                1 01 7 7777
                                            7.088 0.01
8.148 0.00
 30.5
                    52.565
          152.834
 35.5
          152.917
                      50.875
 40.5
          152.967
                      49.098
 41.0
          152.973
                    48.923
 44.3
          153.011
                     47.658
 45.5
          153.023
                    47.168
 46.0
          153.026
                      46.968
 50.5
          152.905
                      45.146
 55.5
          152.738
                      43.344
 60.5
          152.549
                      41.769
 65.5
          152.339
                      40.364
 70.5
          152.143
                      39.105
 75.5
          151.933
                      38.036
 87.5
          151.769
                      37.083
 81.0
          151.770
                      36.995
110.0
          151.887
                      31.428
110.1
          151.876
                      31.407
233.6
          152.118
                      -1.094
476.7
          137.023
                     -80.704
543.2
         350.940
                     -81.984
100.0
          153.466
                       4.781
298.0
          25.986
                     -86.628
100.0
          153.089
                       4.800
297.0
         339.992
                     -89.247
```

· 计1 000 11 10 11 4

0.8

6.5

## TABLE VII. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS ATHENA FLIGHT 122

```
TABLE VILL ACTUAL AND PREDICTED LAURE AND IMPACT BATA
                                    RANGE CROS
MEAN (FT)
         A (D)
                 S(K)
  4504.0 174.9
                 3.7
                       -4.3
  4531.5 193.5
                      -3.5
                  3.1
                              -.8
  4570.5 205.8
                       -2.9
                 2.8
                             -1.4
                                    -.1 -.2
  4615.5 204.5
                       -3.1
                  2.9
                              -i.42.0.0 - .2 11
                  3.3 -3.2
  4669.5 213.1
                              BALLISTIC DISPLACEMENTS IS FILE 185-
 4744.5 213.3 14 3.3 7. -3.2 90-2.12.1-.1 1 -.5 2. - WOT - 30V AR 4830.5 213.2 14 2.7 3 -2.6 91-1.7 1.2-.1 81 -.3 2.5 - WOT - 22070
               14 2 .7 3 . 2 . 6 qu- 1 . 7 1 . 2 . 1 6 1 - . 3 c . S -
  4920.5 203.5
                             -1.5 -.1 -.3 Calena Homua.
                  3.2
                       -3.3
  5034.3 215.5
5150.0 200.8
                             43.40.12.1 45.80.00.1 HIWIE
                 5.1 -4.8
                             #1160 F.1 00.30 ET MOTTAVELE
                3.30 .44.2
  5250.0 195.2
                  4.4
                       -4.9
                             -1.3 (F.1 CHARACTERISTS. CHARACT TOASMI
  5350.0 191.1
                  5.4 x -6.1
                              -1.2 -.1 -.2 X
  5450.0 207.3
                  4.5 = 4.6 -2.4 7 -.1 - .3 437.18
  5625.0 245.8
                  7.0 2 -3.3 -7.3 40 - 110 -1.9 201. 021
  5875.0 250.2
                             -8.900-.1 -1.9008.0
                  3.3
                      -3.2
                       -1.2 -7.9 7 0.0 -1.5 1313133 1 -2 -11.1 3 0.0 -1.7 4 -8 -17.9 7 0.0 -4.6 -1.24 -3.5 -20.0 3 -21 -4.1 8 2 -4.1
  6125.0 261.2
                  7.0
                      -1.2
  6375.0 269.2
                  9.6
  6750.0 267.6
                 15.6
  7250.0 260.2
                 17.7
  7750.0 251.7
                      -6.2 -18.7 - 61 -3.1 290. 501
                                                           7.5
                 17.1
  8500.0 250.4
                       -5.7 -16.0 4 -.1 -3.8 AID . CAL
                 14.7
 9500.0 251.6
                      -6.5 -19.4 36 -. 1 -3.3 agarcet
                 17.8
                                          -2.0 113.161
 10500.0 250.2
                      -5.6 -15.5
                 14.3
                                          -2.5
 12000.0 234.2
                 15.4 -10.4 -14.4 -.2
 14000.0 247.8
                      -9.0 -22.0 2 -.1 -3.0
                20.6
 16000.0 245.0
                       -8.3 -17.9
                                          -1.9 28 28 881
                 17.1
                26.1 -17.0 -24.8 07 - 11 -2.0 282 521
 18000.0 235.5
                 24.0 -13.8 -23.9 -.1
                                           -1.5 986.501
 20000.0 240.0
                 28.0 -20.7 -24.7
  22000.0 230.0
                 31.0 -17.8 -30.9 32 -.1 -1.4 840.431
  24000.0 240.0
                                                             C. CA
                 37.0 -21.3 -36.9 88 -.2 -3.2
  27500.0
         240.0
                                                             0.44
                 45.0 -33.3 -39.7 21 -.2 -2.5 798.861
  32500.0
         230.0
                                                            ₹.0€
                                           -2.4 005.321
                 45.0 -33.3 -39.7 -.2
  40000.0 230.0
                 20.0 -14.8 -17.6 0.0
                                            -.3 TY 6. SEL
  50000.0 230.0
                                            .1 302.50
                      -6.9 12.0 1.0.0
  60000.0 120.0
                 12.0
                            12.0
                                            0.0 001.861
                                  0.0
                      -6.9
  70000.0 120.0
                 12.0
                                           -.2 788.181
                                  $0.0.0
  80000.0
         130.0
                 19.0 -14.1
                             16.8
                           23.6 966-.17
31.1 169-.16
                                            1.1 83% 161
                 29.0 -23.6
  90000.0
          135.0
                                          1.0 Net 10
                 33.0 - 21.8
 100000.0
          125.0
 110000.0
                 33.0 -13.0 35.7 300.00
                                            1.0 010.101
         110.0
                 50.0 -24.3 52.2 07-1
                                            2.0 008.1
 125000.0 115.0
                                            1.6 141.30
                                  es-.2-
 145000.0 135.0
                 76.0 -61.9
                             61.9
                                  0.0
                                            1.3 104. 761
                             80.1
 165000.0 110.0
                 74.0 -29.1
 185000.0 105.0 116.0 -34.6 129.0
                                            1.9 300.086
                                  045.19
                                            .1. 035.861
 205000.0 130.0 86.0 -63.7
225000.0 130.0 80.0 -59.2
                             75.9
                                  0.0
                                            0.0 008.83
                             70.5 $3 0.03
                                   ** 0.0 0.0 line
 245000.0 130.0
                 80.0 -59.2
                             70.6
                                   TAS. ER-
                                              546,009
```

```
TABLE VIII. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA
                                   MEASOLT) ACD SEXT OALS
          ATHENA FLIGHT 122
                                               e. Ect c. 15c4
                              8.- 6.6- 1.6 6.001 6.16ch
6070.5 805.8 8.6 -2.5
                                               4515.5 204.5
TRAJ. 6
           TIME . 8.0 .28.3 -1-
                                   1.2-
                                         2.9
 BALLISTIC DISPLACEMENTS (MILES) 3-
                                   S48 *
                                         3 . 3
                                               4659.5 213.1
             -.5 - PIB -1.3 UP -1.7 TOTAL -3.2 1-BST -55.1
      TOW -.5 PIB! -1.3 SUPS-1.7 TOTAL -3.5 1-BST -2.9
RANGE
CROSS
        TOW
LAUNCH ANGLES
                                               E. See Million
    AZIMUTH 146. ODEGS
                                   33.35EC.
                        -21.0MINS
  ELEVATION 73. ODEGS 4.OMINS 2.05EC.
                                               5150.0 200.F
IMPACT CHARACTERISTICS (MILES)
                                   Cake Ash
                                                2. 181 J. At 16
                XS. = 1 - YS.1-
                                   S. A XO Del
                                               L. Dyc. Tele
                                   IST
           21.764 8 - 43.527 48-
                                               1.623 - 2503
           199.105 0.1 -396.404 6-1- 6-.653 0.1
2ND
                                               2.003 0.2002
2.182 0.2514
2.682 0.2003
                                   5.8- 6.8
PIP
            0.000 @ - G.000 & -
        PREDICTED TRAJECTORY 2.5- 2.1- 0.5
               AZ 7.1- 0.0 EL 1.11- 5.- 0.6
93 3.0- 73.067 2.11- 9.- 3.81
 TIME
                                               6750.0 267.6
   .5
                                          3.21
          146.193 3. ..
          145.918 1.4- 71.316 0.08+ 8.6- 7.71 5.002 0.0857
147.095 1.6- 67.555 7.81- 3.8- 1.71 7.182 0.087
  2.5
                                               T.185 D.08FF
  5.5
 10.5
                                               $.00g G.00@E
          149.614 9.6 - 63.279 0.01 - 1.6 - 1.41
 15.5
          150.696 6.5- 59.796 * 81- 6.8- 8.81 5.188 0.0088
 20.5
          151.5710.8- 56.888 6.6(-3.6- 2.4) $.065 0.00801
 25.5
          152.375 2.5- 54.483 #. AL - A.CI - A.CI S. ALS 0.000SI
          152.857 C. 2 - 52.539 C. 25 - 0. 8 - 0.05 B. TAS C. DOCAL
 30.5
 35.5
          152.939 e. : - 50.848 e. T. - 6.8- 1. TI 0. CAS 0. COCOI-
 40.5
          152.989 0.5- 49.070 8.85- 0.71- 1.88 6.888 0.000FI
                       48.895 P.IS- 8.CI- 0.AS 0.0AS 0.00005
 41.0
          152.996
          153.033
 44.3
                       22000.0 230.0 18.0 -10. -11.7 623.74
          153.045
                       47.138 $.08- 3.VI- 0.18
                                               24006.0 240.0
 45.5
          153.048
                       46.938 9.86- 0.12- 0.75
 46.0
                                               27500.0 250.0
          152.927
                              15.0 -33.3 -15.7
 50.5
                                               32500.0 230.0
                       45.116
                              V.88- 0.88- 0.34
          152.760
 55.5
                       43.312
                                               40000.0 230.0
 60.5
          152.571
                       41.736 4.51- 8.81 0.00
                                               $0000.0 230.0
 65.5
          152.362
                       40.331 0.51 8.0 0.11
                                               60000 0 120.0
 70.5
          152.166
                                    3.3=
                       39.072
                                                      7,0000.0
 75.5
          151.957
                                   1.03- 0.01
                       38.002
                                               130.0
                                                      0.00008
 80.5
                                   6.86- 0.75
          151.793
                       37.049 0.88
                                               135.0
                                                      900000
 81.0
          151.794
                                   33.0 -21.8
                       36.961
                                               0.801
110.0
          151.910
                                               0.011
                       31.392
                                                      0.00001
110.1
          151.900
                                   7.45- 0.00
                       31.370
238.6
          152.141
                                    16.0 - 1.31
                       -1.129
                              0.1a
                                                0.26.
                                                      0.000833
          136.491
476.7
                      -80.895
543.2
          350.963
                      -81.940
100.0
         153.489
                                    03.
                      4.725
                                          13 95
          26.300
293.0
                                    -86.582
100.0
          153.111
                      4.744
298.0
                      -89.247
          340.009
```

## TABLE VIII. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS ATHERA PLIGHT 122

ISI THUE IN ANGLITA .

```
C RANGE CROS
      MEAN (FT) A (D) S(K)
                                     R
                                 -3.7 0.0
      4504.0 180.2
                                                0.0
                          3.2
                            2.9
                                        *.7 8.8.1 G.2.1 3/11
         4531.5 191.4
                                 -3.3
         4570.5 211.3 2.9 -2.9 -1.8 1 -1 2 - 3 3 4 4615.5 209.6 3.1 -3.1 -1.7 0.0 a - 3 a - 4615.5 219.6 3.4 -3.0 -2.5 -.1 a - 5 a - 4744.5 219.9 3.4 -3.0 -2.5 -.1 - 6
4615.5 209.6
4569.5 219.6
        4830.5 215.6 2.7 -2.6 -1.8 0 -.1 -.4 0.3 4 1 1 1 1 1 A 4920.5 204.1 3.1 -3.2 -1.5 0 -.1 -.3 0.2 VOITA 3.1 5034.3 217.3 3.9 -3.6 -2.7 -.1 -.7 1212310 A 1 A 1 1 A 1 1
        5034.3 217.3 3.9
   5150.0 223.6 3.5 x-2.9 -2.8 -.1 -.5 x
    5250.0 223.6 3.8 -3.2 -3.0 -.1 -.5 5350.0 222.2 4.4 -3.8 -3.4 0.0 -.4 5450.0 236.8 5.0 -3.1 -4.8 0.0 -.6 5625.0 247.3 6.8 -3.0 -7.2 -.1 -1.9 5875.0 257.8 9.3 -2.3 -10.4 0.0 -2.2 6125.0 261.2 7.0 -1.2 -7.9 0.0 -1.5 6375.0 269.2 9.6 -.2 -11.1 0.0 -1.7
        6375.0 269.2 9.6 -.2 -11.1 0.0 -1.7
6750.0 267.6 15.6 -.8 -17.9 0.0 -4.6
7250.0 260.2 17.7 -3.5 -20.0 -1.7
       7250.0 260.2 17.7 -3.5 -20.0 -.1 -4.1

7750.0 251.7 17.1 -6.2 -18.7 -.1 -3.1

8500.0 242.3 15.4 -8.2 -15.7 -.2 -3.7

9500.0 249.6 17.2 -6.9 -18.6 -.1 -3.1

10500.0 240.0 13.8 -8.0 -13.8 -.1 -1.7
        12000.0 235.4 16.7 -10.9 -15.8 -.2 -2.7
        14000.0 248.5 20.4 -8.6 -21.9 -.1 -3.0
16000.0 245.0 17.1 -8.3 -17.9 -.1 -1.9
        18000.0 235.5 26.1 -17.0 -24.8 -.1 -2.0
       20000.0 240.0 24.0 -13.8 -23.9 -.1 -1.5
       22000.0 230.0 28.0 -20.7 -24.7 -1.3 -1.3
       24000.0 240.0 31.0 -17.8 -30.9 -.1 -1.4
       27500.0 240.0 37.0 -21.3 -36.9 -.2 -3.2
        32500.0 230.0 45.0 -33.3 -39.7 -.2 -2.5
        40000.0 230.0 45.0 -33.3 -39.7 -.2 -2.4
        50000.0 230.0
                         20.0 - 14.8 - 17.6 0.0
                                                          -.3
        60000.0 120.0
                          12.0 -6.9 12.0 0.0
                                                           - 1
                          12.0 -6.9 12.0 0.0 0.0
        70000.0 120.0
                                                         - ·'z
       80000.0 130.0
                          19.0 -14.1 16.8 0.0
                         29.0 -23.6 23.6 -.1
       90000.0 135.0
                                                           1.1
                         33.0 -21.8 31.1 -.1 1.0
      100000.0 125.0
                         33.0 -13.0 35.7
      110000.0 110.0
                                                0.0 1.0
      125000.0 115.0
                           50.0 -24.3 52.2
                                                -.1 2.0
                           76.0 -61.9 61.9
      145000.0 135.0
                                                   -.2 1.6
                                                0.0 1.3
                          74.0 -29.1 80.1
      165000.0 110.0
      185000.0 105.0 116.0 -34.6 129.0
                                                   - . 1
                                                          1.9
                         86.0 -63.7
      205000.0 130.0
                                         75.9
                                                   0.0
                                                           • l
      225000.0 130.0 80.0 -59.2
                                         70.6 0.0 0.0
      245000.0 130.0 80.0 -59.2
                                          70.6
                                                   0.0
                                                           0.0
```

TABLE IX. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA
ATHENA FLIGHT 122

					*	~		
			,		E43 ==	(C) A	(19) "as	of Davis
		4 4 4		25	A 3	9.081		Haf.
TRAJ. 7	TIME	8.0 36.8		7 7 4	11 6	4. [2]	CASTA	
BALLIS	TIC DISPLACE				5 × 10 ×	F X X X X	F . 1.20 F	
RANGE	TOW - 5	MENTS (MILES:			14 1	Leith		
CROSS	TOW -2.2		UP		TOTAL		1-BST	-2.7
LAUNCH		PIS -33.6	UP	-7.7	TOTAL	-43.5	Carlo	-52.9
AZ	IMUTH 146.00!	FCC 05 044	0 3	- F	193 p.C.	N = F 10.2	C+ SHIA	-40
ELEV	ATION 73.00			34.59		4.515	ALCOSA.	
IMPACT	CHARACTERIST	EGS 0.0M)	NS	6.55	SEC.	I . ACC	C. D. STA	
	X		4 7 1	Q a 100	2.3	4.11.1	A A GOC	Carlo
IST		Υ	4	DX	C # L	DY	0.0012	
2110	21.891	-43.566		1.281		.503	1,000	
PIP	199.276	-397.118	2 4 2	483	p 43	.910	D.OCKE	
1 4 1	0.000	0.000	e vi	1 6-	1 211	S. J. S.	0.0233	
TIME	PREDICTED	TRAJECTORY		1 · 6 ·	8.0	f, Tar	C. Ciad	
		EL			1 1 1	9.188	C. CTEC	
.5	146.426	73.002			De l	3.175	1.3919	
2.5	146.101	71.234			1,5	S. 4 83 5	SETE	
5.5	147.255	67.428	6 1 5 44 1			3 7 7 5	0.0270	
17.5	149.466	63.199	- 75 - A	Ca O-	7.11	8.000	1,0787	
15.5	150.571	59.729	- 31 - 1	In Da	1.51	4.168	和. 位置专家	
20.5	151.443	56.818	· 11 + 1	5.2.	4. 21	8-3-8	0.0068	
25.5	152.283	54.435	. 113 - 3	A A Pro-	The second	245 . 6	0.0000	
30.5	152.818		· * * * *	- 7 -	3 6 5 7	O. Oak	0.00001	
35.5	152.895	50.834			中山水		S. C. C. C.	
40.5	152.946	49.056	4 0 - 17		1		L. herri	
41.0	152.953	48.881	2"	6	De .		6.00081	
44.3	152.989	47.614		- 4 3 10		8.000	G. CCCMI	
45.5	153.001	47.124		n (a) m	200	4 45		
46.0	153.005	45.923	gdy My					
50.5	152.932	45.109				0.08/		
55.j	152.783	43.320	1 f	4 1 10 10				
60.5	152.597	41.746			1.45			
65.5	152.388	40.342		,			~ A	
70.5	152.191	39.084						
75.5	151.980	38.016	5					
80.5	151.818	37.064						
81.0	151.819	36.976						
110.0	151.935	31.412						
110.1	151.925						79	
238.6	152.167	31.391						
476.7	137.270	-1.078				2		
544.2	350.376	-80.227					- MI.	
100.0	153.412	-82.043						
298.0	26.233	4.721					•	
100.0	153.067							
298.0	339.946	4.737						
30000	333.340	-89.247		Mr.				

TABLE IX. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS
ATHENA FLIGHT 122

ATHO TOWN GOA ROMEN SETUIDED ON MANAGE WHEN

			2 4245' SE (T	CONTRACT SECTIONS	Will Halley	il ibu i	はおフェフラ	
MEAN(FT)	A (D)	5 K)	R	C	RANGE		\$1500 CT	
4504.0	174.5	4.2	-4.8		1	•1		
4531.5			-4.1	2				
4570.5		3.4	-3.8	-1.0		2		
4615.5		3.6	-4.0	-1.0		2		THE PART
4669.5	223.7	3.0	-2.5	-2.4	0.0		₩C i	ROMAR
4744.5	223.5	3.0	-2.5	-2.4	1		501	95
4330.5	219.8	2.8	-2.5	-2.1	1	4	233700	
4920.5	2!2.9	3.0	-2.9	-1.9	3.5.1	25.4.32		₩.
5034.3					1	9	MATTA	4 - 3
5150.0	216.5	3.5	-3.2			251-4:183	TOAFA: 0	2 - 1 - 1 - W
5250.0	215.1	3.2		-2.2	0.0			
5350.0				-2.4	1	3237.	2	1, 1
5450.0				-3.2	1	- 4 81	781	
5625.0	244.7	6.0	-3.0	-6.3	1	-1.6		
5875.0						-2.0	10277	
6125.0						-2.1		
6375.0						-1.9		
6750.0						-3.3	351	200
7250.0						-3.4	F 3 1.	
7750.0						-3.0	是	1 - 1
8500.0 9500.0						-3.0 -3.1		•. • •
10500.0						-2.0	15:	
12000.0						-2.9		6 + 5 -
14000.0						-2.8	Told .	4
16000.0						-1.9	3-1	
13000.0				-24.9		-2.0		
20000.0						-1.5		7.3
22000.0						-1.3		
24000.0				4	12-1			4 - S
27500.0			_		2	-3.2		
32500.0						-2.8	-5	
40000.0	240.0	45.0	-25.9	-44.9		-2.7		
50000.0						2		
60000.0	130.0	15.0	-11.1	13.2	0.0	•1		
70000.0	120.0	11.0	-6.3	11.0	0.0	0.0	c .	
80000.0	120.0		-11.5	19.9	0.0	2		
90000.0			-21.9	12.7	1	.6		
100000.0			-16.1	27.9	1	.9		
110000.0	110.0	33.0	-13.0	35.7	0.0	1.0		
125000.0	115.0	50.0	- 24.3	52.2	1	2.0		
145000.0	135.0	76.0	- 61.9	61.9	2	1.6		=
165000.0	110.0	74.0	- 29.1	80.1	0.0	1.3		
185000.0	105.0	116.0	- 34.6	129.0	1	1.9		
205000.0	130.0	86.0	- 63.7	75.9	0.0	.1		
225000.0	130.0	80.0	- 59.2	70.6	0.0	0.0		
245000.0	130.0	80.0	- 59.2	70.6	0.0	0.0		,11

TABLE X. ACTUAL AND PREDICTED LAUNCH AND IMPACT DATA
ATHENA FLIGHT 122

五. 4.

TOTAL CTOTAL

ELATE OF ACES

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1. A. C. E.
                                                  1. 191 A. 1674
 TRAJ. 8
                      8.0 43.1
               TIME
 SALLISTIC DISPLACEMENTS (MILES)
              -.5 PIB -1.3 UP -1.6 TOTAL -3.4 1-BST -2.9
-1.7 PIB -31.6 UP -7.9 TOTAL -41.3 1-BST -50.6
  RANGE
          TOW
 CROSS
          TOW
LAUNCH ANGLES
     AZIMUTH 145. ODEGS
              145.ODEGS 43.OMINS 37.OSEC.
73.ODEGS 2.OMINS 46.1SEC.
                                                  E. VIS CORES
   ELEVATION
                                       46.1SEC.
IMPACT CHARACTERISTICS (MILES)
                                                  DY
•492
•547
                 X
                       -43.576
-397.130
                                          DX
                                     -1.303
-.717
 1ST
            21.869
 2ND
            199.041
 PIP
             0.000
                       0.000
         PREDICTED TRAJECTORY
                                                  9.178 9.2. 2
  TIME
                                                  O. tag hierla
                AZ
                         EL.
           146.727
                         73.046
                        71.283
67.491
63.204
    .5
                                                  d. No D. Hill
           146.421
   2.5
                                                  s. Als o. cera
   5.5
           147.055
                                                  t. ess G. dest
           149.457
  10.5
                                                 E. ICS G.CETT
  15.5
           150.601
                        56.833
54.451
52.542
50.851
49.073
                                                 9. 448 C. ODER
           151.473
  20.5
                                                 3.165 0.0066
  25.5
                                                 e. tes e. eoeci
           152.849
152.926
152.977
  30.5
                                          F. SI S. CAS G. GTCSI
  35.5
                                                 0. TAS 0.000M
  40.5
                                                 O. CAS C. COCAL
                        48.898
           152.984
  41.0
                                                 2.225 c. neces
                                44.3
                                                 G.G.S C. DOCOS
           153.021
                        47.632
           153.032
                        47.142
 45.5
                                                 0.003 0.00000
           153.036
                                                 26000.0 240.0
21300.0 240.0
 45.3
                        46.942
45.128
43.339
           152.963
 50.5
 55.5
                                                 50500.0 240.0
40000 240.0
           152.814
 60.5
           152.628
                        41.766
 65.5
           152.419
                        40.362
 70.5
           152.221
 75.5
           152.010
                        38.037
37.085
 80.5
           151.848
                        36.997
 81.0
           151.849
                        31.434
110.0
           151.956
110.1
          151.955
                        31.412
238.5
          152.198
                        -1.061
476.7
          137.553
                       -80.146
544.5
          349.321
                       -81.986
100.0
          153.443
                        4.746
298.0
          24.286
                       -86.758
100.0
          153.099
                        4.762
298.0
          339.975
                      -89.247
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TABLE X. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS ATRENA FLIGHT 122

BITTE STATE OF THE PROPERTY

BALLISING DIFFERENCES

2. ATHER LINES

AZIMIR 148 ODECS SLIVATION 73.ODESS

22,176

747,145

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S(K) ATAN ROADE CHARANGE CROSSES THA LAUTER LES THAT
  MEAN(FT) A(D)
                                             O.O. TEDITE AMEN
                         -4.5 .1
                                      - . 1
    4504.0 178.7
                   3.9
                         -4.5
                                             -.1
                    3.9
    4531.5 185.2
                                -.4
                                       - . 1
                                 -.9
                                             - .2
    4570.5 194.3
                    3.1
                         -3.5
                                       -.1
                                           (2.2)
    4615.5 193.0
                                 -.9
                    3,6
                         -4.1
                                       -.1
                         -2.7 -1.3
                                      1 - 1
    4669,5 206,2
                                            -.3
                    2.6
128-4744.5 206.2
                         -2.7 -1.3
                                      2-1
                                             - .3
                    2.6
    4330.5 221.8
                         -2.2 -1.9
                    2.5
                                       0.0
                                             - .4
                                       25.08T30
    4920.5 213.2
                         -2.7
                               -1.8
                    2.8
                         34.1550.1.4-
    5034.3 198.3
                    3.8
                                       PHENCH CHARACTERISTICS (MIRS) 1.-

PHENCH CHARACTERISTICS (MIRS) 1.-
                         -3.7 -2.6
    5150.0 215.5
                    3.9
    5250.0 204.4
                    3.8
                         -4.0 -1.8
                        Yd-3-1
                              -1.7
    5350.0 207.9
                    3.1
                                       0.0 - .3
                        -3.6 -2.4
    5450.0 213.6
                    3.8
                                       - . 1 840 . 119 -
                        2.6 -3.3
    5625 0 231.1
                    3.7
                                       - .1 1.4
                         -3.0 -6.4
    5875.0 244.5
                    6.1
                                       0.0 -1.6
                        -1.2 -8.7
    6125.0 262.1
                    7.6
                                       0.0 -1.6
0.0 -3.4
-.1 -3.9
                         1.3 -10.5
    6375.0 276.9
                   9.2
    5750.0 264.6
                         -1.3 -13.6
                  11.8
                  16.9 -3.3 -19.2
    7250.0 260.3
                         -7.4 -19.5
                                      -.1 -3.2
    7750.0 249.1
                  18.1
                 14.0 -8.9 -13.5
                                      -.2 -3.2
    8500.0 236.8
                                       -.1 -2.7
   9500.0 246.7 10500.0 249.7
                 15.3
                         -7.0 -16.2
                   15.3 -6.1 -16.5
                                      -.1 -2.1
   12000.0 243.4
                  17.6 -9.1 -18.2
                                      -.2 -3.2
-.1 -2.7
   14000.0 249.7
                        -7.4 -20.1
                   18.6
   15000.0 246.0
                  13.9 -8.8 -19.8
                                       -.1 -2.1
                                       -.1 -2.0
   18000.0 235.5
                 26.1 -17.0 -24.8
   20000.0 240.0 24.0 -13.8 -23.9
                                      -.1 -1.5
   22000.0 230.0
                                      -.1 -1.3
                 28.0 -20.7 -24.7
   24000.0 240.0
                  31.0 -17.8 -30.9
                                      -.1 -1.4
-.2 -3.2
   27500.0 240.0
                 37.0 -21.3 -36.9
   32500.0 240.0
                 45.0 -25.9 -44.9
                                      -.2 -2.8
   40000.0 240.0
                  45.0 -25.9 -44.9
                                      -.2 -2.7
                                     0.0 -.2
0.0 .1
0.0 0.0
   50000.0 220.0
                 18.0 - 15.9 - 13.3
                 15.0 -11.1 13.2
   60000.0 130.0
   70000.0 120.0
                 11.0 -6.3 11.0
                                             0.0
                                      0.0
   80000.0 120.0 20.0 -11.5 19.9
                                             - .2
  90000.0 150.0 22.0 -21.9 12.7 100000.0 120.0 28.0 -16.1 27.9
                                            . . 6
                                      - . 1
                                      - . 1
                                              .9
  110000.0 110.0 33.0 -13.0 35.7 125000.0 115.0 50.0 -24.3 52.2
                                      0.0
                                             1.0
                                      -.1
                                             2.0
  145000.0 135.0
                 76.0 -61.9 61.9
                                     - •2
                                            1.6
  165000.0 110.0
                 74.0 -29.1 80.1
                                      0.0
                                            1.3
  185000.0 105.0 116.0 -34.6 129.0
                                      - . 1
                                             1.9
  205000.0 130.0 86.0 -63.7 75.9
                                      0.0
                                             . 1
  225000.0 130.0 80.0 -59.2 70.6
                                             0.0
                                      0.0
  245000.0 130.0 80.0 -59.2
                              70.6
                                     0.0
                                             0.0
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TARLEY. (COM) WIND PROPILE AND LICENTED DISTRIBLES. S. LE THATLE ARRESTA

				, b 4	wa . 42412	wa resign	235		
TABLE XI	. ACTUAL AND	PREDICTED LA	UNCH:	AND IMPAC	T DATA	1 2 N YO	1) &	17 3 % 64 m-172%	
	ATHENA FLIG		er - Ingli	ic.	2. 2.	4 61 79.	下。老节走		
				A HE	6.4	6.8	5. (8)		
POST SHO	OT COMPOSITE	0. 4			E, E=	1.8	3,461	The second second	
BALLISTI	C DISPLACEMENT	S (MILES)	2 2	Ø .	7 5	2 6	1.101	C.CTCA	2=0= =
RANGE	TOWER5	PIBAL	-1.4	UPPE	RS	-1.5	TOTAL	-3,4 1-2	ST -1.0
CROSS	TOWER -2.1	PIBAL	-31.2	No. of Acres		-8.2		-41.3 1-B	ST -50.8
			2.0	5.1.	2 18 14	2.3	MARKET IN THE WAY	C.OSFA	
LAUNCH A	NGLES	£	7 6 kg	S. D.				TELESEA.	-
AZIMUTH	146.0DEGS	25.OMIN	S	33.35EC.		2. Z		C. ALCC	
ELEVATIO	N 73.0DEG3			6.5SEC.		\$ 1 km			
IMPACT C	HARACTERISTICS	(MILES)		200 · 100	0.4+	T. C		0.0018	
	X	Y	* A	DX	D	Y i i i		0.6888	3
1ST	22.174	-43.305		998	.76	2 15 1			
2ND	201.117	-396.048	4 52	1.359	1.98			545t.0	
PIP	0.000	0.000	-		0.8.	7 8 50		5622.0	
	PREDICTED	TRAJECTORY	3 75	7.8-				0.4136	
TIME	AZ	EL	1 8	8.01-				o.com	
.5	146.426	73.001	1 4 E2	4.21-				O. 276.	
2.5	146.134	71.232	4 4					0:0ctd	ng de e c
5.5	146.794	67.442		C. 信。 4. 能不				O_Ofgt	
10.5	149.145	63.150	1			1.2		0.0811	
15.5	150.263	59.684		2-11-				O. onca	
20.5	151.212	56.772	<b>⇒</b> .	5.35				0.4000	
25.5	152.020	54.397	E 16	8.81.				T. (1011)	
30.5	152.527	52.498							
35.5	152.645	50.796	9						
40.5	152.696	49.016	± //E	TO A STATE OF				6.60001	
41.0	152.702	48.841	2 4	2. 25 <del>-</del>				SELECT GOT	
44.3	152.736	47.574		Trans-				TELLIS OF A	
45.5	152,746	47.084	- T		1 11 2			V = 31 - V + S	
46.0	152.751	46.883	-				12年を発売	11 11 11 11 11 11 11 11 11 11 11 11 11	
50.5	152.6/8	45.067	14 "		OT INST	A 11-	0.013	1-42111	
55.5	152.530	43.276	: a "1		9.25-	0.14	2443	The state of	
60.5	152.346	41.700	2 A 700	1. L.		To a la	1245	A 1 3 1 4 4 5 3	
65.5	152.137	40.295	12			1.31		701-12 VI. 4.14	
70.5	151.941	39.037	1 4	5.00				0.000.3	
75.5	151.730 ·	27 067	+ 5		6.2	- 1 1		-루 글로 워싱턴 (1) 	
80.5	151.568	37.014			2.71-	7 7 7	4-141	State of the party	
81.0	151.569	26 026	20		10 × 10 ***	5.50		Basemer.	
			,			2,83	and the		
					3 2 2 40			1. 100011	
			2		, ,\(\lambda_{-m}\)		0.311	- Jack	
			Br.	9.15	in the	0.05	1 5 C - 1	a. Occupy	
		w		4.4	x = 12.5	74.60			
		à		* , P 9 1	D. &2 -	1 2 2 1	L +	The Art of the second	
			4 -	24	1	0.05		white the same	
		<i>*</i>				1.79		and the second	
				4		100			

TABLE XI. (CONT) WIND PROFILE AND IMPACT DISPLACEMENTS ATHENA FLIGHT 122

MEAN (FT)	A(D)	S (K)	R	TOATO ES		CROSS
4504.0	181.9	4.3	_4.9	- 2 · · · · · ·		0.0
4531.5	184.2	3.8	-4.4	3	1	1
4570.5	(2199.5)	3.0	-3.3	a) -1.2	1	1067-12
4615.5	195,8	3.6	~4.0	months I	and the second second second	
4669.5	1213.91	2.6	-2.5	E -1.7	0.0	3
4744.5	213.7	2.6	-2.5	-1.7	1	4
1830.5	229.1	2.6	-2.0	-2.3	0.0	<b>~.5</b>
4920.5	217.7	2.8	-2.6	-2.0	-,1 ·	4
5034.3	198.3	3.8	-4.2	-1.4	1	4
5150.0	215.5	3.9	-3.7	-2.6	- 2 - 2 - 1 · ·	4
5250.0	204.4	3.8	-4.0	-1.8	1	×.3
5350.0	207.9	3.1	-3.2	-1.7	0.0	2
5450.0	213.6	3.8	-3.6	-2.4	0.0	3
5625.0	231.1		-2.7	-3.3		-9-
5875.0	244.5	6.1	A .10 W	-6.3	41	-1.4
6125.0	262.1	7.6	-1.2	-8.7	0.0	-1.6
6375.0	276.9	9.2	1.3	-10.5	0.0	-1.6
6750.0	264.6	11.8	-1.3	-13.5	0.0	-3.4
7250.0	260/3	16.9	-3.3	-19.2	1	-3.9
7750.0	251.5	16:7	-6.1	-18.2	-,1	-3.0
8500.0	233.9 1	13.9	-9.4	-12.9	2	-3.0
9500.0	242.4	15.4	-8.2	-15.7		-2.6
10500.0	250.8	15.4	-5.8	-16.7		-2.1
12000.0	243.4	17.6	-9.1	-18.1	2	-3.1
14000.0	247.9	19.1	-8.3	-20.4	1	-3.1
16000.0	245.0	17.1	-8.3	-17.8	1	-1.8
18000.0	235.5	26.1	-17.U	-24.8	1	-2.0
20000.0	240.0	26.0			1 1	
22000.0			-15.0	-25.9		-1.7
	2/,0.0	33.0	-19.0	-32.9		-1.7
24000.0	249.0	31.0	-17.8	-30.9	1	-1.4
27500.0	240.0	35.0	-20.2	-34.9	2	-3.0
32500.0	240.0	43.0	-24.8	-42.9	2	-2.7
40000.0	240.0	39.0	-22.5	-38.9	1	-2.3
50000.0	235.0	43.0	-28.4	-40.6	0.0	7
60000.0	210.0	19.0	-18.9	-10.9	0.0	1
70000.0	205.0	16.0	-16.7	-7.8	0.0	0.0
80000.0	125.0	20.0	-13.2	18.9	0.0	2
90000.0	150.0	22.0	-21.9	12.7	1	.6
100000.0	120.0	28.0	-16.1	27.9	1	.9
110000.0	110.0	33.0	-13.0	35.7	0.0	1.0
12 000.0	115.0	50.0	-24.3	52.2	1	2.0
145000.0	135.0	76.0	-61.9	61.9	2	1.6
165000.0	110.0	74.0	-29.1	80.1	0.0	1.3
185000.0	105.0	116.0	-34.6	129.0	1	1.9
205000.0	130.0	86.0	-63.7	75.9	0.0	.1
225000.0	130.0	80.0	-59.2	70.6	0.0	0.0
245000.0	130.0	80.0	-59.2	70.6	0.0	0.0

TABLE XII. SECOND-STAGE IMPACT DATA
ATHENA FLIGHT 122 (4) A

SECOND-STAGE IMPACT DATA	LATITUDE 9.8	Longitude (Degrees)
NOMINAL	33.1025 N	106.5931
RECOVERY SURVEY	33.3029 N	106.8250

WIND PROPERTY AND INCHOL STATES OF THE STATES

CSI THELE AMERICA

TABLE RI. - (CONT)

199.3

213.6

0, 4:

. AL

MEAN (ET)
4504.0
4511.5
4570.5
4615.5
4680.5
4744.5
4830.5

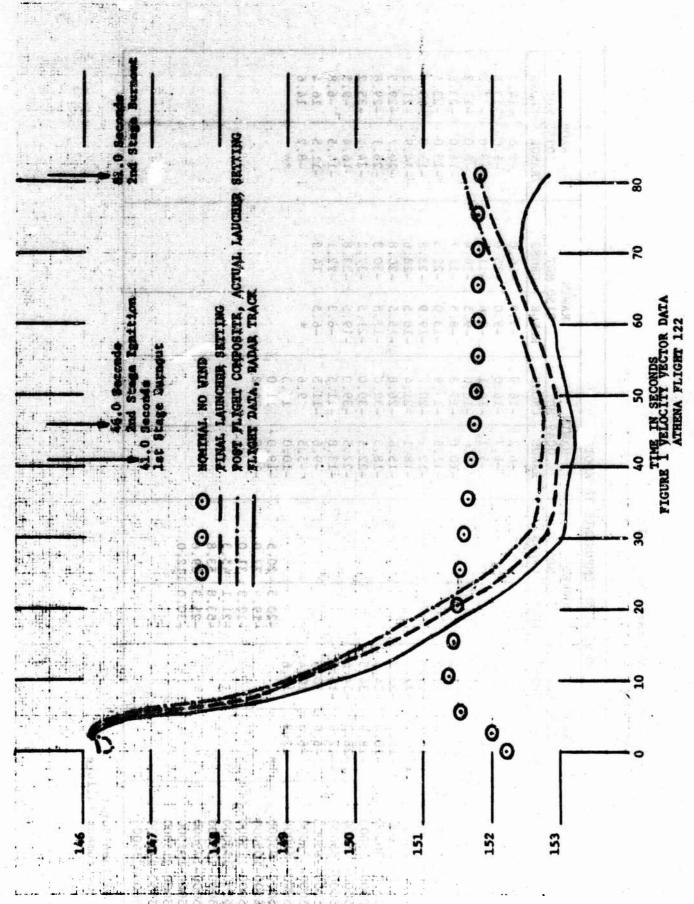
0.0248

6.6138

- - JOUE

TABLE XIII. GREEN RIVER COMPLEX SURFACE OBSERVATIONS MADE AT C240 MDT, ATHENA FLIGHT 122.

211 0240	DI, HILIDAN I BESHI	73 6	6.630	0.261
TEMPERATURE	4.0x 63 E.J		DEGREES F	0,416
DEW POINT	s. <b>13</b> €.€-	20 - 4 - 42 ×	DEGREES F	0,2.5
PRESSURE	25.770	Service .	4 4 4	CURY
VISIBILITY	15+	e lan	MILES ?	J.0./2
RELATIVE HUMIDITY	34		PERCENT 245.0	3,000
1		1	1. 1	



VELOCITY VECTOR AZIMUTE (GEODETIC DEGREES)

TABLE XIV. ROCKET, RAOB, AND RAWIN WIND DATA ATHENA FLIGHT 122

MEAN WIND	COMPONENTS IN	KNOTS		elege a	10.78 J	wett	
- · ·	ROCKET	RAWIN 0049	MOT	RAWIN 0150	N.	RAOB 0255	MDT
RANGE	CROSS	RANGE	CROSS	RANGE		RANGE	
	Market Contraction of the Contra	-6.2	-16.9	-5.8	-16.0	-8.5	-14,7
100		-5.7	-16.0	0.6-	-15.6	-8.0	-13.8
h 7	The same	-5.1	-14.1	9.6-	-11.5	0.8-	
2000		-5.6	-15.0	-9.5	-16,4	φ	-17.2
10 m		-10.0	•	-8.5		•	-23.5
		-11.5	-19.9	-13.0	-22.5	-13.0	-22.5
		-18.1	-21.4		28	-14.9	-21.3
		-15.6	-26.8	-15.5	-26.8	-20.7	-29.5
		-18.5	-32.0	-17.5		-25.1	-29.8
			•	•	-37.2	-24.7	-35.2
		-22.5		-19.5	-33.8	-16.4	-9.5
		-13.8	-11.5	6 4 6 4	-22.1	-14.5	-6.8 16.8
		15.00	9.6				14.6
		-10.0	17.3			**	A ARREST AND TO A COUNTY OF THE COUNTY OF TH
N	20.5	-19.0	11.0				
9.	-	-14.0	24.2 84	THE TRACE			0
יַ הַ	45.3	TROOK	THE CO.	COLLECT N			
8 "	•		Z Z Z	Charles L. William		4.	to a receive displaying the majorish
10	112		Ulas A				
			ಕರೆಕ ಭನ್ಮರ	3)		AND PROPERTY OF THE PROPERTY O	The second
		The state of the s	学があるる	1000			the Name of Street, and Street, and Street, St

\* Balloon Burst \* Instrument Failure

PRESSURE GEOMETRIE TEMPERATURE REL. HUM. THE NET TABLE AVE. TABLE AVE. TABLE AVE. TABLE AVE. TEMPERATURE REL. HUM. THE NET TABLE AVE. DEMONTOR PERCENT TO THE NET TABLE AVE. TEMPERATURE REL. HUM. THE NET TABLE AVE.	NOITA	ALTITUDE 428	O FEET	HSL	-	T . LE	DATA		<b>—</b>	COORDINATE
MILLIBARS MSL FEET DEGREES RELHUMENT FORTH MILLIBARS MSL FEET DEGREES CRINGRADE PERCENT OF THE MILLIPART MSL FEET DEGREES	ENS ION	. 132	2310 HRS M		<b>Y</b> 5	X (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	0-5	1/0 1	2592	58.00 FEET 55.00 FEET
## Libars at Temperature Ala Dempolar Percent Ala Titude Ala Dempolar Percent Ala Titude Ala Dempolar Percent			, ;			2	a ta	2 12	30	1000
### LIBARS MSL FEET DEGREES CENTING PERCENTY   1845   1850   1865			RES	F GEOMETRI	GWE L	PATITOR O	7 GA	10	di.	\$ 1000
### ### ### ### #### #### ############				ALTITUDE	AIR	DEMONTANT	0000	CIN VI	N.	M 1000
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0 75354.4 -50.8 0 81365.5 -50.0			48.	982	. 9					September 1
.0 81365.5 -50.			-cl+	535	0					40
				1365.	50.					

STATIJU ALTITUDE 4285.00 FEET MSL 10 JULY 70 2310 HRS MDT ASCENSION NO. 132

## TABLE XVI

DMETR	PRESSURE	TEN	PERATURE	REL.HUM.	DENSITY	SPEED OF	MINU 28.5	DATA	I NOF X	
	MILLIBARS	DEGREES	CENTIGRADE	7	METER	KNOTS	K		REFRACTION	
4285.0	m	ं		•	030-	8	0	9	026	
500	•	-		4	21.	69	349.	•	.00026	
000	1.	2	. •	2.7	001.	0	325.	•	.00026	
5	•	•	•	1.7	86.	69	301.	•	00025	
000	-	5	•	2.0	971.	68	277.	•	.00024	
500°	7	6	1.7	7.6	956	67	253.	•	.00024	
.000	6	6		8.7	945.	99	245	0	.00023	
•	779.3	14.5	+·0-	27.7	928	0.999	244.8	12.6	.0002	
000	5	7		7.8	914.	64.	245.	3	.00022	
500.	2	•		1.2	903	63	245.	4	.00022	
000	8	4		4.5	891.	61.	248.		.0002	
500.	5.	3		7.9	880.	59	250.	Š	.00022	
0000	2.	-		8.0	868.4	658	255.	+	.00021	
0500.	6	÷	-3.5	4.9	855.	657	259	3	.00021	
1000.	.9	6		8.4	843.4	655	264.	3	.00020	
11500.	n			3.3	831.	54.	265.	3.	.00020	
12000.0	p.el			1.7	819.2	653	264.	3	61000	
2500-	6			0.1	807.3	651	260.	4	.00019	
3000.	7.		-11-2	8.6	95.6	650	254.		.00019	
3500,	5			~	84.1	49	248	5	.00018	
4000.	+		~	5.4	72.7	648	242	•	.00018	
4500.	3.		2	4.8	61.5	646.	240	9	.00017	
5	1.		1.0	4	50.9	645	239.	•	. 0001 7	
5500.	0		-10.9	5	40.5	643	234.		.00017	
60009	6		7.6	ŝ	30.3	45	230	•	.00017	
6500.	8	-3.3	1.6-	4.	720-2	640	228.	-	.00017	
70,07	8		8	3.	10	38	227.	8	.00017	
7500.	7.			2	-002	9	225	0	. 0001 7	
0	7		-10.3		87.	36	226.	2.	1-000168	
500.	7.	•	•	1.99	•	9	229.		00016	
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E COORDINATES 858.00 FEET E 855.00 FEET N	会がある。	INDEX	4	3	1,000161	1.000157	5	1.000147	1	1	1-000140	1.000434	0013	1.000133	1.000138	2100	00012	1.000122	-	1100	1100	1100	1100	2	010	01000	010	010	0100	60000	6000	6000	6000	1.000092
511 568 592		TA . AI		KNOTS	25.2	5.92	26-1	25.9	25.2	24.9	C . S.	25.6	2000	*		28-8	0	2.		33.5	3	7.00	*	•		36.1			•		45.8	9	45.0	47.7
20 35 4	意 · · · · · · · · · · · · · · · · · · ·	MIND DA	DIR 28.8	DEG M OF TN	230.6	231:8	M	233.0	3	232.8	M	227:8		26	27:	-	31:	32 :	31.	1	29.	N	58:	29 3	30,		30	30.	31,	32.	CO	34.	m	235.6
ATA ATA ATA ATA ATA ATA ATA ATA ATA ATA	cont)	PEED	ONNO	XNOTS.		634.4	633.0	1	630.4		62756	626.4	625:2	*	22.	621.5	20.	16.	-	16:	15.	-	7			07.		604.2	2			597.6	0	
AIR U 08013 RIVE	TABLE XVI	SITY	3	METGR	663.9	653.1	643.1	33	6.23.5	613.9	604.5	2.965	585.1	575.6	. 99	957.2	48.	539.4	0	521.5	2		496.5	488.8	480.9	2		4.764	6.694	445.5	438.2	428.1	421.1	414:2
		REL	PERC		67.2	9.49	51.4	38.2			2-44	46.7	47.6	48.5	4-64	51.0	54.3	26.2	12.8			24.0	18.0	11.9	9.6*	**0.6	8.4*	7.8 **	7.2**	**9*9	**0.9	5.4**	4.8**	4.2**
FEET MSL IRS MOT		EMPERATURE	DEMPOINT	CENTIGRADE	2		-	-21.8	-27.4	-24.9	-23.3	-23.6	-24.3	5	-25.7			-35.1		-41.2	•		-43.3		•	-52.5		-55.8	-57.5		-61.0	-62.8	1-64-7	9-99-
85.00 FEE 2310 HRS			AIR		4.1-			-10.2	-11.2		-13.6		-15.6	-16.5	17.	-18.6	•	-20.6		-22.5				-27.1	•	-29.7			-33:7	5	-36.3	1.		ċ
TITUDE 42	į	PRESSURE		MILLIBARS	07.		87.	478.3	.69	59.			2		15	407.4	O	_	3	375.3		0	$\sim$	10	-		m	9		N	10	9	83.	16.
STATION AL 10 JULY 70 ASCENSION		GEOMETRIC	ALTITUDE		თ	9500.	0000	20500.0	1000	1500	2000	22500.0	23000.0	23500.0	24000.0	24500.0	25000.0	14	26000.0	26500.0	27000.0	27500.0	28000.0	28500.0	29000.0	29500.0	30000.0	30500.0	1000	1500	N	2500	3000	33500.0

\*\* AT LEAST ONE ASSUMED RELATIVE HUNIDITY VALUE WAS USED IN THE INTERPOLATION.

FATION ALTITUDE 4285.00 FEET MSL	2 1910080132	ASTA SITE COURDINA
	GREEN RIVER	-568858.00 FEE
SCENSION NO. 132	1 = 1	
	TABLE STATE OF THE	

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	COURDIN	55.00 FEET.		EX X	ACTION	7000	80000	.00008	.0000	90000	*0000	90000	.00008	. 00007	.00000	.00007	10000	.00007	.00007	. 00007	.00000	.00006	*00000	.00000	,00006	*00000	,00006	.00005	10000
	HARAINE AARA	9	10 128	TA	KNOTS	40 C	119		5		-			2	-		-	?		-		3	9.0		3	. 6		-	,
				33 0	. T	4	234.2	34	34.	34.	35	35	36	36	36	36	36.	34.	32.	28.	29:	315	34.	37.	104	+3.	+0+	184	•
< -	2 a		(Cont)	PEED	KNOTS	- N	0	. 68	87.	85.	**	82.	2	32:	10	80.	19:	18	11:	16.	33	* 9 2	13.	72:	70.	60	. 65	24	
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	A C	4 17		3	2 2 3 3	0	3.0**	6.	9 0	a •	9 •			9	4 5-6	0	2) 20,000	0	4 0 2	d gov	0-	×	*	£3.	9	j June	di di	1/2	
	ET MSL	TOW	1	ERATURE	CENTIGRADE	3	-70.9	73.	.9	. 6		2	p.			10.		8	2	7	yazı	5	3	a marit	· intry	1	egenti de desergi	0	
	4285.00 FEE			-	DEGREES			44.	S	•					-	•		•	4					2.0	-			-	
	TITUDE	NO. 132		PRESSURE	MILLIBARS	70,	264.9	59.	53.	47.	42.	37.	31.	26.	21;	15.	10.	05.	01.	.96	91.	87.	82.	78.	74.	70.	.99	62.	
1	STATION AL	CENS ION		ш.,	u I <del></del>	0000	34500.0	5000	5500	36000.0	6500.	37000.0	7500	8000.	8500.	0006	950n.	.0000	40500.0	10001	41500.	2000.	2500.	3000.	3500.	4000	44500.0	5000.	
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AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION \*

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INDEROOFS OF OCCUPA	100 X	33	33	10000	+0000	100000	00000	60000	00000	00000	E0000	6000	00000	60000	000	00000	00000	0000	00005	20000	00000	0000
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MIND DA DIR 28.8 DES M. DF. TN	9	21.	130	600	0	25	19	24	90	12.5	34.1.9	27.1	32	17	210	24.	N		284	200	31	33.
Sound Sound Knots	CC 15	nn		500	9	09	919	61.	9-7	. 19	61.	61.	01.0	62.	63.	. 49	65.	.99	29	000	00	69
TABLE XVI (C DENSITY S GM/CUBIC	24.5	13.	08.	96	8				S -	-		6	000			-	-			- 6		30
REL.HUM. PERCENT																			20	x		
PERATURE DEMPUINT CENTIGRADE																						
AIR DEGREES	. 66.5	-66.5	-66.6	9.99-	-66.3	-66.0	-65.4	-65.1	-65.0	-65.1	-65.1	-65.1	165.2	8 - 49 -	0-49-	-63-3	-62.5	-61.7	6.09-	1.09-	-59.2	-59.0
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UPPER AIR DATA	1910080132	GREEN RIVER	10000000000000000000000000000000000000
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3	761 .UN		PRESSURE		MILLIBARS		7	65.0	60.5	59.1	57.7	56.3	55.0	53.7	52.4	51.2	6.64	8.84	47.6	46.5	45.4	44.4	43.3	42.3	41.3		4.60	20.00	36.96	35.9	្ស	34.3	33.5	32.7	32.0
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ION ALTITUDE 4285.00 FEET MSL	ULY 70 2310 HRS MDT	ASCENSION NO. 132
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#### UPPER AIR DATA 1910080132 GREEN RIVER

TABLE XVI (Cont)

# -568858.00 FEET E 2592855.00 FEET N

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SPEED OF SOUND KNOTS	- W W W W W **
DENSITY SPEED OF GN/CUBIC SOUND METER KNOTS	4444
PERCENT	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
AIR DEGREES	- 500.0 - 500.0 - 500.1 - 50.1
GEONETRIC PRESSURE TEMPERATURE ALTITUDE AIR DEMPOINT MSL FEET MILLIBARS DEGREES CENTIGRADE	31.2 30.5 29.8 29.1 28.5
GEDNETRIC ALTITUDE MSL FEET	79000.0 79500.0 80000.0 80500.0

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# TABLE XVII

TA	SPEED	KNOTS
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WIND DATA	DIK 28.8 SPEED	DEC M DF
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DIK 28.8 DEG W OF TN	23.	4	46.1	59.5	60.3	40.6	27.2	31.4	29.8	31.9	29.7	33.1	34.5	30.9	40.4	43.2	20.4	28.8	23.7	30.0	46.2	9.9	6.2	
PERCENT		29.											1. **					9 34	1	2 4			¥ 2	
DEWPOINT CENT IGRADE	8.4			3	6	4	8	-12.8	3	•	44.	6	8					9	20 1	y 0		5 0		
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LLIBARS	50.	0	50.	00	50.	00.	50.	00.	50.	00	50.	00	50.	00	75.	50.	25.	00	80.	3	0	0	0	30.0

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

(MOD) IVE HISAT

DESCRIPTION OF STREET Se Modern Com

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STATION ALTITUDE 4285.00 FEET MSL 11 JULY 70 0255 HRS MDT ASCENSION NO. 135

UPPER AIR DATA 1920033135 GREEN RIVER

#STM SITE COURDINATES -568858.00 FEET E 2592855.00 FEET N

## TABLE XIX

INDEX	REFRACTION	0000	00028	00027	1.000269	00025	52	00055	09024	00024	00023	00023	00023	1.000225	00022	00021	00021	00000	00000	00050	00019	00010	61000	61000	00018	91000	00017	1000	1000	00016	91000 TU-22	中ではいるのでは、	
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PEED	KNOTS	671.2	.69	10.	10.	68.	9.199	.99	. 49	63.5	62.2	60-8	59.5	58.	56.8	55.4	54-1	52.1	- 4-19	20.0	1.84	6-94	45.1	43-3	41.4	40.	39	38	36	35.	35.		4
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REL-HUM.	7 7		52.9	6.94	4	5	45.8	•	7.1	8	8.4.	9.1-	F.	+.0	1.0	1.1	2.3	3.0	4.8	6.7	8.7	4.2	0.5	6.7	0	3.5	8.7	8.9	6.6	6.0	71.3		
MPERATURE	CENTIGRADE	ં ું	•	0	9.1	•	7.5	9.9	•	•				1.6		-					-3.8			9-4-		•		→ <b>8</b> -	-8.5	-10.1	-12.0		
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PRESSURE TEMPERATURE REL-HUM. DENSITY. SPEED DF NIND DATA SPEED 11LLIBARS DEGREES CENTIGRADE METER. KNOTS. DGI & DEF. B. SPEED METER. METER. KNOTS. DGI & DEF. B. SPEED METER. METER. B. SPEED METER.					. 1	XIX	C.		65	
11LIBARS DEGREES CENTIGRADE HTTER KNOTS. DEG M DF TN KNOTS. B. SPEED 487.3 - 8.0 -14.4 60.5 654.0 634.0 537.5 32.0 487.3 - 8.0 -17.1 49.6 654.0 634.0 537.5 32.0 487.3 - 8.0 -17.1 49.6 654.0 634.0 537.5 32.0 487.3 - 9.3 -20.0 18.0 650.2 634.0 533.1 30.7 487.3 - 9.3 -20.0 18.0 650.2 631.6 523.1 30.7 459.2 - 110.1 -30.0 18.0 620.2 631.6 523.1 30.7 450.1 -12.2 -31.8 18.0 600.7 629.1 528.3 27.5 441.2 -32.6 18.0 600.7 629.1 528.3 27.5 442.5 -13.2 -32.6 18.0 600.7 629.1 528.3 27.5 442.5 -15.3 -32.6 18.0 600.7 629.1 528.3 27.5 442.5 -15.3 -32.6 18.0 591.2 621.9 529.3 27.5 442.5 -15.3 -32.0 18.0 591.2 621.9 529.3 27.5 442.5 -15.3 -32.1 18.0 591.2 621.9 529.3 27.5 442.5 -15.3 -34.0 52.5 591.2 621.0 529.3 27.5 441.5 -32.1 44.5 -32.1 622.0 522.0 229.3 27.5 441.5 -32.1 44.5 521.6 622.6 522.6 234.1 27.5 33.9 340.9 -20.1 -30.8 38.1 524.9 618.0 522.6 235.2 235.3 235.0 337.6 -22.0 -33.1 47.3 505.1 618.3 523.3 537.6 -33.1 47.3 505.1 618.3 523.2 537.7 34.4 520.2 -22.3 -2	GEUMETRIC	PRESSURE	ш	PERATURE	EL.HUM	DENSITY	EED	IIND DA	M Y	×
10. Librars Degrees Centigrade MeTer. KNOTS. Deg W OF TN KNOTS. R 696.9 984.5 123.0 124.4 49.6 664.9 684.0 123.2 123.1 12.1 149.6 664.9 684.0 123.2 123.1 120.1 120.1 120.0 18.0 620.2 631.6 223.1 120.1 120.1 120.0 18.0 620.2 631.6 223.1 120.1 120.1 120.0 18.0 620.2 631.6 223.1 120.1 120.1 120.0 18.0 620.2 631.6 228.7 228.7 228.7 450.1 120.1 120.1 120.0 18.0 620.2 631.6 228.7 228.7 120.1 120.1 120.0 18.0 620.2 631.6 228.7 228.7 120.1 120.1 120.0 18.0 620.2 631.6 228.7 228.7 120.1 120.1 120.0 18.0 620.4 620.4 622.7 120.1 120.1 120.0 18.0 620.4 620.4 620.3 27.6 423.9 120.1 120.1 120.0 18.0 620.4 620.4 620.3 27.6 423.9 120.1 120.1 120.0 18.0 620.4 620.4 620.3 27.6 423.9 120.1 120.1 120.0 120.1 120.0 120.1 120.0 120.1 120.0 120.1 120.0 120.1 120.	ALTITUDE		2	DEMPOINT	ERCENT	GN/ CUBIC.	GNO	IR 28.8	SPEED	40
496.9         684.9         684.0         686.0 <td< th=""><th>MSL FEET</th><th>ILLIBAR</th><th>DEGREE</th><th>CENTIGRADE</th><th></th><th>METER</th><th>NOTS</th><th>EG M DF T</th><th>OTS</th><th>REF</th></td<>	MSL FEET	ILLIBAR	DEGREE	CENTIGRADE		METER	NOTS	EG M DF T	OTS	REF
496.9         -8.4         -17.1         49.6         658.0         634.0         235.9         32.4           477.3         -8.8         -21.1         36.4         641.7         633.3         234.7         31.9           477.4         -9.3         -26.5         23.3         620.2         631.6         234.7         31.9           468.4         -10.1         -30.9         18.0         600.2         631.6         229.8         229.8           450.1         -12.2         -32.6         18.0         600.2         621.6         229.8         27.8           461.5         -13.2         -32.6         18.0         600.2         627.1         228.8         27.8           472.5         -17.5         -34.6         18.0         501.2         527.2         228.3         27.8           407.5         -17.5         -34.6         18.0         502.6         527.3         227.3         227.3           407.5         -17.5         -34.6         18.0         502.6         527.3         227.3         227.3         227.3         227.3         237.3         237.3         237.3         237.3         237.3         237.3         237.3         237.3         237	000			4	•	-49	946	37	~	8
487.3       -8.8       -21.1       36.4       641.7       633.3       234.7       34.7         467.4       -9.3       -26.5       23.3       630.6       632.7       233.1       30.6         459.2       -10.1       -30.9       18.0       610.4       630.4       229.8       28.7         459.2       -11.2       -30.9       18.0       610.4       629.1       229.8       28.7         441.2       -13.2       -31.8       18.0       610.4       629.1       228.8       27.4         441.2       -13.2       -34.4       18.0       610.4       229.8       27.4         423.5       -16.4       -36.3       18.0       511.2       625.3       227.3       27.4         407.2       -17.5       -34.0       18.0       512.7       625.3       230.3       27.4         407.2       -17.5       -30.1       18.0       518.0       521.3       230.3       27.2         407.2       -17.4       -30.1       46.0       525.3       626.2       231.8       231.8         390.9       -21.4       -30.1       46.0       529.8       618.0       231.8       231.8         3	9500.			17.	6	53	36	35	2	00015
477.8         -9.3         -26.5         23.3         630.6         632.7         23.1         458.1           468.4         -10.1         -30.0         18.0         610.2         631.6         231.5         23.6           450.1         -12.2         -31.8         18.0         610.4         629.4         228.3         24.6           450.2         -13.2         -31.6         18.0         600.7         629.4         228.3         24.6           441.2         -13.2         -32.6         18.0         591.2         627.3         229.8         228.7         27.6           422.5         -16.4         -35.3         18.0         561.6         625.4         228.7         27.7           407.2         -17.5         -36.1         18.0         561.6         625.4         228.7         27.7           407.2         -17.5         -36.1         18.0         564.6         627.1         228.7         27.7           407.2         -17.5         -36.1         46.0         564.6         627.1         231.8         27.8           399.0         -21.4         -30.1         46.0         522.6         236.3         236.3         236.3         236.3 <td>0000</td> <td></td> <td>3</td> <td>21.</td> <td>9</td> <td>41.</td> <td>33</td> <td>34</td> <td></td> <td>1.000149</td>	0000		3	21.	9	41.	33	34		1.000149
468.4         -10.1         -30.0         18.0         620.2         631.6         231.5         229.8         229.8         459.2         -11.2         -30.9         18.0         610.4         630.4         229.8         229.8         471.2         -12.2         -31.6         18.0         610.4         630.4         229.8         22	0500		6	26.	3	30.	10	33.	•	00024
459.2         -11.2         -30.9         18.0         610.4         630.4         229.8         27.4           450.1         -12.2         -31.8         18.0         600.7         627.9         228.3         27.4           452.5         -14.3         -32.6         18.0         581.9         620.4         228.3         27.7           432.5         -16.4         -35.3         18.0         581.9         620.4         228.3         27.7           415.5         -16.4         -35.3         18.0         581.9         620.4         229.3         27.4           415.5         -16.4         -36.3         18.0         581.9         620.4         229.3         27.4           415.5         -16.4         -36.3         18.0         564.6         621.1         230.3         27.4           415.5         -16.4         -30.1         30.3         564.4         621.1         230.3         27.5           383.0         -21.4         -30.1         46.0         524.6         621.1         236.3         249.3           383.0         -21.4         -30.1         46.0         524.8         618.0         628.3         249.3         236.3         236.3 </td <td>1000</td> <td>•</td> <td>10.</td> <td>30.</td> <td>8</td> <td>20.</td> <td>31.</td> <td>31.</td> <td>6</td> <td>4</td>	1000	•	10.	30.	8	20.	31.	31.	6	4
450.1       -12.2       -31.8       18.0       600.7       629.1       228.3       27.4         441.2       -13.2       -32.6       18.0       591.2       627.9       228.7       27.4         423.9       -15.3       -34.6       18.0       563.6       627.9       229.3       27.4         415.5       -16.4       -35.3       18.0       572.7       625.3       230.3       27.2         415.5       -16.4       -35.3       18.0       52.5       624.3       22.5         399.0       -18.8       -32.1       30.3       27.2       231.8       27.2         399.0       -18.8       -32.1       45.6       624.1       234.1       27.2         399.0       -21.4       -30.8       36.8       529.8       618.0       235.2       236.3         383.0       -21.4       -30.8       46.0       521.6       616.4       235.7       236.3       237.2         359.9       -22.6       -33.5       36.8       513.3       615.0       235.3       236.3       345.3         359.9       -23.8       -34.9       444.5       513.3       615.0       236.3       345.3       345.3	21500.0		111.	30.	8	10.	30.	29.	8	00013
441.2       -13.2       -32.6       18.0       591.2       627.9       228.7         432.5       -14.3       -33.5       18.0       591.2       626.6       229.3       27.4         415.3       -15.3       -34.4       18.0       572.7       626.9       229.3       27.4         407.5       -16.4       -35.3       18.0       572.7       625.3       230.3       27.4         407.5       -16.4       -35.3       18.0       525.4       625.6       231.8       27.2         399.0       -18.8       -32.1       30.3       545.4       621.1       231.8       27.2         383.0       -21.4       -30.1       46.0       529.8       618.0       235.2       29.3         387.5       -22.6       -33.5       36.8       521.6       610.5       235.3       235.3         387.5       -22.6       -33.5       47.3       47.3       610.9       235.3       235.3       235.3         387.5       -25.0       -33.4       47.3       489.1       610.8       235.3       236.3       236.3       236.3       236.3       236.3       236.3       236.3       236.3       236.3       236.3	2000		12.	31.	8	00	29.	28.	-	00013
432.5       -14.3       -33.5       18.0       581.9       626.6       229.3       27.4         423.9       -15.3       -34.4       18.0       572.7       625.3       230.3       27.4         415.5       -16.4       -35.3       18.0       22.5       554.9       625.6       231.8       27.2         415.5       -16.4       -36.0       22.5       554.9       625.6       231.8       27.2         399.0       -18.0       22.5       36.8       58.1       235.2       236.2       237.2 <t< td=""><td>2500</td><td></td><td>13.</td><td>32.</td><td>8</td><td>91.</td><td>27.</td><td>28.</td><td>-</td><td>00013</td></t<>	2500		13.	32.	8	91.	27.	28.	-	00013
423.9       -15.3       -34.4       18.0       572.7       625.3       230.3         415.5       -16.4       -35.3       18.0       563.6       624.1       231.8       27.2         407.2       -17.5       -34.0       22.5       554.9       622.6       234.1       231.8         399.9       -18.8       -32.1       30.3       564.4       621.1       235.2       24.3         399.9       -20.1       -30.1       46.0       529.8       618.0       235.2       29.3         383.0       -21.4       -30.1       46.5       513.3       616.4       235.2       29.3         367.5       -22.6       -33.5       36.8       521.6       616.4       235.2       29.3         367.5       -23.8       -35.2       44.5       513.3       615.0       235.2       39.3         352.3       -25.0       -33.1       47.3       616.4       236.2       33.4         352.3       -26.3       47.3       616.4       236.2       33.4         352.3       -26.3       44.5       611.9       236.2       33.4         347.6       -27.5       -44.6       601.3       234.3 <td< td=""><td>3000</td><td></td><td>14.</td><td>33.</td><td>8</td><td>81.</td><td>26.</td><td>29.</td><td>-</td><td>00013</td></td<>	3000		14.	33.	8	81.	26.	29.	-	00013
415.5 -16.4 -35.3 18.0 563.6 624.1 231.8 231.8 407.2 -17.5 -34.0 22.5 554.9 622.6 234.1 235.2 249.0 -18.8 -32.1 30.3 546.9 622.6 235.2 249.1 390.9 -20.1 -30.8 38.1 554.9 618.0 235.3 235.2 390.9 -20.1 -30.8 38.1 554.9 618.0 235.3 235.7 30.3 357.6 -23.8 -32.6 44.5 513.3 618.0 235.7 30.3 357.6 -23.8 -33.1 47.3 505.1 618.5 235.9 33.3 237.6 -23.8 -33.1 47.3 505.1 613.5 236.9 33.3 237.6 -28.8 -39.7 34.9 4.66.0 608.8 236.9 33.3 237.6 -28.8 -39.7 34.6 44.6 604.0 236.3 34.6 236.9 33.0 -47.2 21.9 458.6 604.0 236.3 34.0 236.3 34.6 236.9 236.3 34.6 236.9 236.3 34.6 236.9 236.3 34.6 236.3 35.3 -32.5 -47.2 21.9 458.6 604.0 231.7 34.0 236.3 37.0 -32.5 -54.8 13.3 4.5 4.5 60.0 22.4 230.1 338.2 230.1 -33.8 -50.2 17.7 44.5 528.3 228.3 39.2 230.3 -33.3 -35.3 11.3 34.4 422.7 597.3 228.3 422.7 597.3 593.8 228.0 422.7 595.8	3500		15.	34.	<b>3</b>	72.	25.	30.	-	00012
407.2       -17.5       -34.0       22.5       554.9       622.6       235.2	24000-0		16.	35.	8	63.	24.	31.	-	00012
399.0       -18.8       -32.1       30.3       545.4       621.1       235.2       28.3         390.9       -20.1       -30.8       38.1       538.0       619.5       235.7       30.3         383.0       -21.4       -30.1       46.0       529.8       618.0       235.7       30.3         367.5       -22.6       -32.5       44.5       513.3       618.0       235.7       32.5         357.5       -23.8       -32.6       44.5       513.3       618.0       236.2       33.2         359.9       -25.0       -33.1       47.3       505.1       618.0       236.2       33.2         352.3       -26.3       -32.6       43.0       497.0       611.9       237.7       33.2         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       33.2         330.5       -28.8       -39.7       34.6       473.6       601.3       234.9       34.9         310.9       -47.2       21.9       458.6       604.0       236.3       35.2       36.3         310.1       -33.8       -50.2       17.7       458.6       604.0       600.0       237.3 <td< td=""><td>4500</td><td>•</td><td>17.</td><td>34.</td><td>2.</td><td>54.</td><td>25.</td><td>34:</td><td>-</td><td>00012</td></td<>	4500	•	17.	34.	2.	54.	25.	34:	-	00012
390.9 -20.1 -30.8 38.1 538.0 619.5 235.3 29.3 383.0 -21.4 -30.1 46.0 529.8 618.0 235.7 30.3 35.2 -22.6 -33.5 36.8 521.6 618.0 235.7 30.3 257.5 -22.8 -32.6 44.5 513.9 618.0 236.2 33.3 259.9 -25.0 -33.1 47.3 505.1 613.5 236.9 33.3 252.3 -26.3 -35.2 43.0 497.0 611.9 236.9 33.3 23.6 -28.8 -39.7 34.6 481.3 608.8 236.3 34.6 47.2 21.9 458.6 604.0 231.7 37.3 37.6 -32.5 -44.5 26.1 466.0 605.6 233.2 36.3 310.1 -33.8 -50.2 17.7 451.3 602.4 230.9 37.3 37.9 37.9 37.9 37.9 35.1 -52.5 15.3 44.0 600.7 229.5 39.1 29.3 -57.3 11.3 *** 422.7 597.3 228.3 41.3 228.3 422.7 595.5 -40.6 -62.9 7.3 *** 415.8 593.8 228.3 422.7	5000		18.	32.	<b>.</b>	45.	21.	35.		00012
383.0 -21.4 -30.1 46.0 529.8 618.0 235.7 30.375.2 -22.6 -33.5 36.8 521.6 616.4 236.2 32.6 35.7 36.8 367.5 -23.8 -32.6 44.5 513.3 615.0 236.9 236.6 33.1 47.3 505.1 613.5 236.9 237.2 33.3 252.3 -26.3 -35.2 43.0 497.0 611.9 237.7 33.3 344.9 -27.5 -31.4 47.0 611.9 237.7 33.0 33.0 -42.0 30.4 473.6 607.2 236.3 34.3 323.6 -31.3 -44.5 26.1 466.0 605.6 233.2 36.3 310.1 -33.8 -50.2 17.7 451.3 602.4 230.3 37.0 231.7 37.0 230.1 38.0 229.5 37.7 203.3 -35.1 -52.5 15.3 4 444.0 600.7 229.5 39.2 283.8 -39.3 -57.3 11.3 4 429.7 597.3 228.8 39.2 228.8 -39.3 -40.6 -62.9 7.3 4 415.8 593.8 228.9 42.2 7.5 597.5 -40.6 -62.9 7.3 4 415.8 593.8 228.9 42.2 7.5 59	5500		20.	30.	8	38,	19	35.	6	00012
375.2       -22.6       -33.5       36.8       521.6       616.4       236.2       32.5         367.5       -23.8       -32.6       44.5       513.3       615.0       236.2       33.5         359.9       -25.0       -33.1       47.3       505.1       611.9       236.9       33.5         352.3       -26.3       -37.4       38.8       489.1       610.3       237.2       33.5         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       33.5         337.6       -28.8       -39.7       34.6       473.6       601.9       236.3       34.5         330.5       -30.0       -42.0       30.4       473.6       601.2       236.3       34.5         310.1       -32.6       -47.2       21.9       456.0       600.7       236.3       37.5         310.1       -33.8       -50.2       17.7       456.0       600.7       230.3       37.5         296.7       -35.1       -52.5       15.3**       464.0       600.7       229.3       37.5         290.1       -35.1       -52.5       15.3**       429.7       599.0       229.3       41.5     <	26000.0	383.	21.	30.	9	29.	18.	35.	6	00012
367.5       -23.8       -32.6       44.5       513.3       615.0       236.6       33.         359.9       -25.0       -33.1       47.3       505.1       613.5       236.9       33.         352.3       -26.3       -35.2       43.0       497.0       611.9       237.2       33.         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       33.         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       33.         330.5       -28.8       -39.7       34.6       473.6       607.2       236.3       34.3         323.6       -31.3       -44.5       26.1       466.0       607.2       236.9       37.         310.1       -32.6       -47.2       21.9       458.6       604.0       231.7       37.         310.1       -33.8       -50.2       17.7       451.3       602.4       230.9       37.         296.7       -35.1       -52.5       15.3**       444.0       600.7       229.5       39.         290.1       -37.9       -57.3       11.3**       422.7       595.9       228.3       415.8	26500.0	375.	22.	33.	•	21.	16.	36.	2	11000
359.9       -25.0       -33.1       47.3       505.1       613.5       237.2       33.8         352.3       -26.3       -35.2       43.0       497.0       611.9       237.2       33.         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       34.6         337.6       -28.8       -39.7       34.6       481.3       608.8       237.7       34.6         330.5       -28.8       -30.0       -42.0       30.4       473.6       607.2       236.3       34.6         320.6       -31.3       -44.5       26.1       466.0       604.0       231.7       37.3         310.1       -32.5       -47.2       21.9       458.6       604.0       231.7       37.3         310.1       -33.8       -50.2       17.7       451.3       602.4       230.9       37.3         296.7       -35.1       -52.5       15.3**       444.0       600.0       229.5       39.         290.1       -35.1       -52.5       11.3**       429.7       597.3       229.5       39.         277.5       -40.6       -60.0       593.8       415.8       593.8       593.8	27000.0	367.	23.	32.	*	13.	15	36.		1.000117
352.3       -26.3       -35.2       43.0       497.0       611.9       237.2       33.4         344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       34.9         337.6       -28.8       -39.7       34.6       481.3       608.8       236.3       34.9         330.5       -28.8       -30.0       -42.0       30.4       473.6       601.2       234.9       35.9         323.6       -31.3       -47.2       21.9       456.0       605.6       233.2       36.9         310.1       -32.5       -47.2       21.9       456.0       604.0       231.7       37.3         310.1       -33.8       -50.2       17.7       451.3       602.4       230.3       37.3         296.7       -35.1       -52.5       15.3**       444.0       600.7       229.5       39.3         290.1       -35.1       -52.5       11.3**       420.7       597.3       228.3       41.5         293.8       -39.3       -59.9       7.3**       415.8       593.8       228.3       41.5	27500.0	359.	25.	33.	-	05.	13.	36.		.00011
344.9       -27.5       -37.4       38.8       489.1       610.3       237.7       34.8         337.6       -28.8       -39.7       34.6       481.3       608.8       236.3       34.8         330.5       -28.8       -30.0       -42.0       30.4       473.6       601.2       234.9       35.3         323.6       -31.3       -44.5       26.1       466.0       605.6       233.2       36.3         310.1       -32.5       -47.2       21.9       458.6       604.0       231.7       37.3         310.1       -33.8       -50.2       17.7       451.3       602.4       230.9       37.3         296.7       -35.1       -52.5       15.3**       444.0       600.7       229.9       39.         290.1       -36.5       -54.8       13.3**       429.7       597.3       228.3       41.5         283.8       -39.3       -59.9       9.3**       415.8       593.8       228.3       41.5	28000.0	352.	26.	35.	3	97.	11:	37	ë	.00011
337.6 -28.8 -39.7 34.6 481.3 608.8 236.3 34.8 330.5 -30.0 -42.0 30.4 473.6 607.2 234.9 35.3 34.5 13.3 -44.5 26.1 466.0 605.6 233.2 36.3 37.3 16.8 -32.5 -47.2 21.9 458.6 604.0 231.7 37.3 310.1 -33.8 -50.2 17.7 451.3 602.4 230.9 37.3 228.8 228.8 39.3 -59.9 5.3 34.4 44.0 600.7 229.5 39.3 228.8 422.7 597.3 228.3 41.3 44.2 7.3 415.8 593.8 228.3 41.5 277.5 -40.6 -62.9 7.3 4.4 415.8 593.8 228.3 42.2 7.3 4.5 593.8 228.0 42.5 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5	28500.0	344.	27.	37.	8	. 68	10.	37:	3	00011
330.5 -30.0 -42.0 30.4 473.6 607.2 234.9 35. 323.6 -31.3 -44.5 26.1 466.0 605.6 233.2 36. 316.8 -32.5 -47.2 21.9 458.6 604.0 231.7 37.3 310.1 -33.8 -50.2 17.7 451.3 602.4 230.9 37. 303.3 -35.1 -52.5 15.3** 444.0 600.7 230.1 38. 296.7 -36.5 -54.8 13.3** 436.8 599.0 229.5 39. 290.1 -37.9 -57.3 11.3** 422.7 597.3 228.8 41. 283.8 -39.3 -59.9 9.3** 415.8 593.8 228.3 41.	29000.0	337.	28.		4.	81.	.80	36.	+	.00010
323.6 -31.3 -44.5 26.1 466.0 605.6 233.2 36.3 316.8 -32.5 -47.2 21.9 458.6 604.0 231.7 37.3 310.1 -33.8 -50.2 17.7 451.3 602.4 230.9 37.3 303.3 -35.1 -52.5 15.3** 444.0 600.7 229.5 39.2 296.7 -36.5 -54.8 13.3** 436.8 599.0 229.5 39.2 228.8 39.3 -59.9 9.3** 422.7 595.5 228.8 42.0 42.7 595.5 228.3 41.0 577.5 -40.6 -62.9 7.3** 415.8 593.8 228.0 42.0	29500.0	330.	30.			73.	01.	34:	5	. 0001 0
0       316.8       -32.5       -47.2       21.9       458.6       604.0       231.7       37.8         0       310.1       -33.8       -50.2       17.7       451.3       602.4       230.9       37.9         0       303.3       -35.1       -52.5       15.3**       444.0       600.7       230.1       38.9         0       296.7       -36.5       -54.8       13.3**       429.7       599.0       229.5       39.3         0       283.8       -37.9       -59.9       9.3**       422.7       595.5       228.3       41.9         0       277.5       -40.6       -62.9       7.3**       415.8       593.8       228.0       42.9	30000.0	323.	31.	*	0	. 99	05.	33.		.00010
.0       310.1       -33.8       -50.2       17.7       451.3       602.4       230.9       37.         .0       303.3       -35.1       -52.5       15.3**       444.0       600.7       230.1       38.         .0       296.7       -36.5       -54.8       13.3**       436.8       599.0       229.5       39.         .0       290.1       -37.9       -57.3       11.3**       429.7       597.3       228.8       41.         .0       283.8       -39.3       -59.9       9.3**       412.7       595.5       228.3       41.         .0       277.5       -40.6       -62.9       7.3**       415.8       593.8       228.0       42.	30500.0	•	32.	1.		58.	. 50	31.	-	.00010
.0 303.3 -35.1 -52.5 15.3** 444.0 600.7 230.1 38. .0 296.7 -36.5 -54.8 13.3** 436.8 599.0 229.5 39. .0 290.1 -37.9 -57.3 11.3** 429.7 597.3 228.8 39. .0 283.8 -39.3 -59.9 9.3** 422.7 595.5 228.3 41. .0 277.5 -40.6 -62.9 7.3** 415.8 593.8 228.0 42.	31000.0	•	33.	3	-	51.	02.	30	-	.00010
.0 296.7 -36.5 -54.8 13.3** 436.8 599.0 229.5 39.0 .0 290.1 -37.9 -57.3 11.3** 429.7 597.3 228.8 39.0 .0 283.8 -39.3 -59.9 9.3** 422.7 595.5 228.3 41.0 277.5 -40.6 -62.9 7.3** 415.8 593.8 228.0 42.0	31500.0		35.	52.	5	44.	00	30.	8	6000
.0 290.1 -37.9 -57.3 11.3** 429.7 597.3 228.8 39. .0 283.8 -39.3 -59.9 9.3** 422.7 595.5 228.3 41. .0 277.5 -40.6 -62.9 7.3** 415.8 593.8 228.0 42.	32000.0		36.	54.	•	36+	.66	29		60000
.0 283.8 -39.3 -59.9 9.3** 422.7 595.5 228.3 41 .0 277.5 -40.6 -62.9 7.3** 415.8 593.8 228:0 42.	32500.0		37.	57.	11.3**	29.	97.	28.	•	6000
3500.0 277.5 -40.6 -62.9 7.3** 415.8 593.8 228.0 42.		•	39.	59.	9.3**	22.	95.	28.		000
	3500.		40.	62.	7.3**	15.	93.	28:		6000

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

AIR DATA	0080135	N. KIVER
UPPER AIR	192	444

																						1									0			
E CUURDINATES 858.00 FEET E 855.00 FEET N		INDEX	, j	REFRACTION	1.000091	1.000090		- •			- 1	<b>●</b> 10				- 17			- 9 3	-	. 6	. 90		1 6	2 6	52	1.0		=	1	1.000054	00000	1-000052	00000
MSTM SIT -568 2592	* * * * * * * * * * * * * * * * * * *	TA AT	SPEED	NO T	42.7	(1)	5	9	46.9	-	10	5	2	0	-	5		10	9	8	• • ; • •	0	0	8	5	0	-	6	-	6	6		21.4	2
1 3	1:	. * 7 7	DIR 28.8	3	28	228.5	29.	30.	10	34.	36:	37.	38.	37:	35.	32.	29.	28.	27.	28.	30.	34.	36.	38	39.	41.	38.	32.	24.	.91	13.	11.	12.	18
4 50 80 80 80 80 80 80 80 80 80 80 80 80 80	ont)	PEE	2	SION	92	590.2	88	85.	85.	83.	82.	1 8	81.	82.	82.	BI.	19.	180	16.	15.	14.	72.	71.	70.	70.	69	68.	67.	.99	65.	64.	0	61.	4
OFFER ALK D 192008013 GREEN RIVE	TABLE XIX (Cont)	SI	M/CUBIC	H	. 60	402.5	.96	. 68	82.	15.	-59	-19	52.	* 55	36.	30.	23.	17.	11.	-90	00	94.	88.	82.	76.	71.	65.	59.	54.	43	4	39	234.7	OCC + Harris
•		I.	ERCEN			3.3**	•			C			U .		T	de .		ž.		2. 11. 3		100	B. Jan.		79	4	1000000	ē.			200000	お ない		
FEET MSI. HRS MDT		PERATURE	DEWPOR NT	CENTIGRADE	-99	-70.7	77.		-	4										1.10%	4. 4. 7. 7					\$4.50 \$1.00	4	3 (m)	3	Andrew St.		12 / 15 1 A		
4285.00 FEE 0255 HRS 5		E	AIR	<b>DEGREES</b>	-42.0	43	4	•	-47.3	-48.5	1.65-	-50.0	8 -6 5-	9.65-	4.64-	-50.5	3	-52.6	53	54	-55.7	56	57	58	58	59	9	60	5	2	63	63	•	17
ALTITUUE 428 70 N NG. 135		PRESSURE		MILLIBARS		265.5		-			-		•																					2
STATION AL		METR	TUDE	SL FEET	34000-0		5000	5500	6000	36500.0	37000.0	37500.0	38000.0	38500.0	39000.0	39500.0	40000.0	40500.0		0 41500.0	42000.0	42500.0	43000.0	43500.0	44000.0	44500.0	45000.0	45500.0	46000.0			47500.0	4800	0000

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE MAS USED IN THE INTERPOLATION.

CHICARIST DIE DE POR

00RDIN	F A A	1.000050	40000	00000	40000	0000	+00000	00000	-00003	00003	.00003	.00003	0000	.00003	.00000	200002	20000	00000	.00002	.00002	.00002	.0000	0005	1-000063
2592858	SPEE	22.4	00	0	00	00	1	- 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6		80 4	· m	4	0 0	0	N	4 0 0	10	- 65		3 .			19.0	6.61
	DIR 28.8 DEG W DF TN		24.	11	13	08.	12.	215.6	34	69	4	N	86	17.	34.	m I	\$ W	200	19	16.	63	93.	00	
on CO	10 - 00 Au	4	60.	600	009	000	-09	0 0	000	60.	60	60.	60.	69	.69	60	P 0	100	77		72.	72.	13	14.
THE STATE OF	DENSITY SIGN/COBIC		- M	02.	20	97.	83.		2	65.	S S S S	54.		38.	35.	35	200	220	19	16.	13.	10.	-	•
=	REL.HUM. PERCENT																							1
T MSL MDT	TEMPERATURE R DEMPOINT EES CENTIGRADE		,															•						
4285.00 FEE 0255 HRS	TEMPI AIR DEGREES (	-66.0	10 W	0	7-65-7	-65.7	-65-8	-65°B	6-59-	-65.9	-66.0	1-99-	-66-1	-58.9	-59.2	50	7.00	ט מ	5	-	•	0		- 55° 8
ALTITUDE 428 70 1N ND. 135	PRESSURE MILLIBARS	133.2	26.	20.	117.6	111.9	6	106.4	-	7-86				85.1		•	1.67	- 4	1 (1)	-	0		•	65.3
TATION ALT 1 JULY 70 SCENSION N	GEDMETRIC ALTITUDE MSL FEET M	49000-0	5000000	51000.0	51500.0	52500.0	53000.0	53500.0	54500.0	55000°0	56000-0	56500.0	57500.0	0.0000	58500.0	0.00069	0.00066	60000-0	61000-0	1500	2000	2500	3000.	63500.0

		2	
UPPER AIR DATA	1920083135	GREEN RIVER	
	STATION ALTITODE 4285.00 FEET MSL	11 JULY 70 . 0255 HRS MDT	ASCENSION NU. 135

#STM SITE COURDINATES -568858.00 FEET E 2592855.00 FEET N

TABLE XIX (Cont)

	INDEX	REFRACTION	1.00002	1.00002	-	1.00002	1.00002	1.00002	1.00002	1.000019	1.00001	1.00001	1.00001	1.00001	1.00001	1.00001	1.00001	1.00001	1.00001	1.00001	1:00001	1.00001	1.00001	1,00001	1.00001	1.00001	1:00001	1.00001	1.00001	1.00001	1.00001	1-00001
4	DATA	KNOTS	- ap	9	3	-		8	•	7.3		•	8	6	-	4	.9	6	-	*	.9	0	6	8	-	-	3	6	7 .	15.5	4	1
	MIND IR 28-8	7	-	16.	19.	19.	7	.56	83.	68	2	38.	37.	37.	34.	29.	24.	24.	24.	25	26.	27.	29.	32.	36.	38	39.	41.	43.		44.	42
,	SPEED OF	KNOTS	574.6	75.	75.	76.	76.	76.	76.		17.	17.	77.	78.	78.	78.	19.	-61	79.	79.	80.	80.	80.	800	81.	81.	81.	82.	82.	82.	82.	23
	DENS/ITY S	METER	2	.66	•	4	2	0	7.	85.8	3.	-	9	7.	in.		2.	0	8	-	5	4	2.	1.	6	8	9	5	*	2	-	6
	KEL-HUM.																															
	EKATURE DEMPUINT	CENTIGRADE																														
	TEMP	EES		5	-54.6	+	•	3	8	-53.5	•	3	å	2	.4	0	å	-	-		-	1.	9	;	3	-50.1	6.64-	1-65-	-49.5	-49.3	-48° U	-48.E
	PRESSURE	MILLIBARS			8.09		58.0			54.1	•	•	•					•								37.2			4.	33.9	3.	2
	GEUMETRIC ALTITUDE	SL FEE	64006.0	64500.0	65000.0	65500.0	66000.0	66500.0	67000.0	67500.0	68000.0	68500.0	69000.0	0.00569	700000	70500.0		0.00517	72000.0	72500.0	73000.0	73500.0	74000.0	74500.0	S	75500.0	Q	76500.0	-	-	78000.0	3

COORDINATES 58.00 FEET E 55.00 FEET N	INDEX UF REFRACTION	1.0000010 1.0000010 1.0000010 1.0000000 1.0000000 1.0000000
MSTM SITE COC 2592855.0	PEED	1
R DAFA 1135 IVER	ED OF IND ITS	00000000000000000000000000000000000000
UPPER AIR DAFA 1920083135 GREEN RIVER TABLE XIX (CONE)	DENSITY GM/CUBIC METER	44444444 44444444 44444444444444444444
	REL.HUM. PERCENT	•
FEET MSL HRS MDT	PRESSURE TEMPERATURE AIR DEMPOINT MILLIBARS DEGREES CENTIGRADE	
15. UU FEE 0255 HRS	TEMF AIR Degrees	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
STATION ALTITUDE 4285.UU 11 JULY 70 0255 ASCENSIUM NO. 135	PRESSURE MILLIBARS	31.7 30.9 30.2 29.9 28.9 27.0 25.4 25.4
STATION ALTITUDE 4: 11 JULY 70 ASCENSIUM NO. 135	GEOMETRIC ALTITUDE MSL FEET	79000.0 79500.0 80500.0 81000.0 81500.0 82500.0 83500.0

### TABLE XX

UATA	IN KNOTS	3.2	;	15.1	17.0	17.8	20.1	•	2		8	33.9	•	÷	•	8	6		•	15.6	18.6	12.3	1.6	30.1	13.0	•
#1 01K 28	DEC N	325.2	51.	45.	43.	240.5	242.4	44.	36.	228.3	35.	37.	29.	33.	27.	37.	14.	223.7	43.	44.	185.5	21.	137.6	28.	128-4	
KEL-MUM. PERCENT		46.	40.	<b>48</b> •		55.							14.4*									,	•			
TEMPERATURE DEMPOINT	CENT I GRADE	10.0	7.1	4-1	9•0	-2.5	-4.3	-8-2	-16.1	-31.8	2	-35.9	3													
A	DEGREES	25.27	•	14.8	10.5	D. V.	2.5	-5-1	-d.2	-12.2		-25.7	-35·8	-45°B	-52.8	-58.1	-62.4	6-59-	6-59-	-58.4	0.75-	-54.5	-52.8	-56.8	-48.1	6.24-
GEOPUTENTIAL	FEET	5043.	6704.	8571.	19473.		40	lesdl.	19323.	21991.	24910.	28125.	31709.	35770.	40556.	43348.	46502.	50147.	54594.	59091.	61849.	65070.	68917.	73663.	79848.	83836.
PRESSURE 6	MILLÍBARS	850.0	800.0	750.0	700.0	650,0	600.0	550.0	500.0	450.0	400.0	350.0	300.0	250.0	200.0	175.0	150.0	125.0	100.0	80.0	70.0	0.09	50.0	40.0	30.0	55.0

AT LEAST UNE ASSUMED RELATIVE HUMIDITY VALJE MAS USED IN THE INTERPOLATION. \*\*

4051.00 FEET MSL 0240 HRS MDT	
E 4051.01	361
STATION ALTITUDE	
STATION AL	ASCENSTON NO.

UATA		
I LEVEL	3	JALLEN
SIGNIFICAN	1920	& D

451560.00 feet a

### TABLE XXI

Ÿ						6	I o	1	7	1	- b			,				,																
		REL.HJM.	PERCENT	78.	30	<b>5</b> •••	2.0	28:0	30.0	0.4	0-25	40	7.0	3∙0	2.0	5.0	18.0	9	0.4	1	3				٠									
JALLEN	TABLE XXI	RATJRE	UEMP	_		•	· · · · · ·		•	-4	'n	3	21.	33.	25.	35.	-30.5	37.	.55		0													
	TA	EMPE	·¥	ES	•		ċ	7		3	4.5	•	J. 5-	-13.0	-15.0	-14.8	-17.8	-19.5	-25.5	7-07-	-34°B	5.64-	-55.5	-64.7	-05.2	7.00-	6.02-	4.65-	1.40-	-64.2	-57.1	-54.9	6.44-	6.24-
		SEUME	ALTI TUD	SL F	4	1004	4380.7	0445.4	10453.2	11577.1	14155.5	17460.1	10349.9	22151.1	6.34062	23557.7	25000.0	200c5.3	20504.4	50564.5	32007.5	35792.5	40343.0	44534.0	40505.7	41590.5	50394.5	54612.9	24323.b	ひゃつけつ マロ	019.	170	33	95451.9
HRS MDT		PRESSURE		HLLIBARS	77		0.19	2	00.00	72.0	11.0	0.0	21.0	3	7	3		•	7	2	3	-	_	3	_	2	7	~	3.0	?			₹3.0	10.0

STATIJN ALTITUDE 4051.00 FECT MSL 11 JULY 70 0240 HRS MDT ASCENSIUN NJ. 301

UPPER AIR DATA 1920030361 JALLEN

mofw Site coutolingfes 451500.00 Feet a 465177.00 Feet N

# TABLE XXII

INDEX	ر. م	REFRACTION
TA	SPEED	RVOTS
ALNO UA	UINECTION SPEED	DEGREES ( IN)
SPEED OF	CNUCS	KNUTS
DENSITY	GM/ CUBIC	METER
EL-HUM.	LKCUNT	
FRATURE	ALR CERPOINT P	CENTICRADE
TEMP	878	UESKEES
GEUMETRIC PRESSURE		MSL FEET MILLIBARS DEGREES CENTI
GEUMETRIC	ALTI FUDE	MSL FEET

GEOMETRIC	PRESSURE	H 0	MPERATURE	AEL HUM.	ر	SPEED OF	ONTR	7 A C C C C C C C C C C C C C C C C C C	I NOE X	
MSL FEET	MILLIBAKS	DESKEES	CENTICRADE	נ		KNUTS	DEGREES (IN)	KNOTS	REFRACTION	
4051.0	0.770	7.77	•	-	02	671.0	•	÷	1.000266	
3	n	26.3	7.4			15.	*		1.00026	
5000.0	3.848	25.6		29.4	5	74.	8	.3×	1.00026	
5500.0	433.9	24.9	2.7		970.8	673.7	342.7		1.00025	
0.0000		2.42		10	. 9	72.	36.	.6X	1.00025	
0.0050	305.5	23.5	7.0	28-1	7	71.	330.8	*2.	1.000	
7000.0		42.2				70.	22.	•	<b>*2000</b> *	
7500.0		21.0	j.¢	)	~	.60	5	•	00023	
80000		15.8			.0	.10	31.	•	.00023	
8500.0		10.0	•	3	2	56.2	77.	•	.00023	
90000		17.4	1.5	*	9		-		1-000027	
9500.0		10.1	•	5	•	03.4	31.		-00022	
100001	7111.4	14.9	3	0	~	C. 2.0	30.	•	-00022	
10500.0		13.7			445.	.5	BB		.00021	
		14.2	3	3	2	58.9	N		.Guuzi	
9 11500.0		10.8	-1-		824.	57:2	73.		.00021	
12000.0		9.6	-1-		2	-	51.	•	3.000200	
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13000.0		7.2		1-54	793.2	052-9	235.2		. 00019	
13500.0		1.9	-4-		-E11	5	3		.uco19	
14000.0	014	N.4	-5	•	7.897	50.1	3.	•	•	
	600	3.7		6.9	2	48.7	•		.00018	
15000.0	591.8	2.0	-1-	•	2.	47.3	1:	•	.uoule	
15500.0		1.5	1-8-		733	0.940	196.1		1-0001 40	
160000		4.0	6-			0440	2		-00017	
losuu.u		1-0-	0		713	3	194.	•	- 00001 Z	
17000-0	548	-1.9	2		103.	41.	192.	-	9	
17500-0	556.3	-3.U	-13.5	4-44	Work 693.2	40	-	•	. unule	
18000-0	528.		1.	7.	683.		187.0		1.0001 co	
18500.0	517.	15.3	1 °		1 2 5 673-3	37.	3	4	00012	

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STATION AL	TITUDE 40	ALTITUDE 4051.00 FEET MSL	T MSL	-	× 5	\$ 500 (0)	3	ASTA SLIE	JUADINA TE
11 JULY 70 ASCENSION NO	) Nü. 361	0240 HRS	MDT		XXII	* 5,	ない ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	156	7.00 FERT N
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GEUMETRIC ALTITUME	PKESSOKE		TEMPEKA LOKE	ARE HOM.		PERD OF D	AL CALL	( Cuus	NUENCOOD
MSL FEET	MILLIBAKS	UEGAEES	CENTICKADE	) ( (	METER	KNUTS		KNOTS	EF SAUT LUNDS
				,	(A)	* * * * * * * * * * * * * * * * * * *	4	* (	4.0000
0.00061	201.8		. 77		03.0	*1.050	0.		-00015
15200-0	204	9-)-	57	ċ.	5 - 3	034.7	0	7.7	-000150
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0.00012		٠,		•	23.6	630.6		4.7	- 000142
21500.0		-	Ø :	9	7.4	2-679		1.5	-000140
22000-0	_	┥,	200					7.0	-000138
22500.0	*45.	+ - 47-	29.	•	2	656.5	20	3.0	. 00ul 36
23000-0	433	-15.4	-97	j	2	5 . 3	9.1	4.3	.000135
23500.0	<b>455</b> °	-14.9	3	9	3	9.6	9.0	7-0	.000130
24000.0		-15.7	C:	5	9	8	1	7.8.	.000127
24500.0	7+08+5	-16.8	•	-		9.6	:	9.5	.unu125
25000-0		-17.0	-20.5	3	2	2.3	1.1	1.0	-00012
25500.0	391.9	-18.0	ċ	å		1.3	5.1	2.5	.000121
26000.0		-10.4	7.	å	1.	7.3	6.8	4.1 ·	.000119
0.00502	376.2	-50.1	9	4		8.3	6.6	6.4	.000117
		-24.1	Š	8	1.	0.1		5.5	.40011
27500.0	•	-23.5	0	53.2	50305	.615.3	1.9	5.1	411000
780000	353.5	- 25.0	5		0	3.5		4.4	.0001
24500.0		-50.4	-45.5	÷		1.8	1.7	4.3	.00011
J.		-27.5	9	*	0	4.0		4.1	.00010
79500.0	•	- 28.0	7	3	20	•	2.9	Š	· contro
30000.0	364.4	9.67-		1:	65.		2	2	200
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AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE MAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MAL 0240 HRS MDT ASCENSION NO. 11 JULY 70

UPPER AIR DATA 1920333361 JALLEN

ASTA SITE COURDINATES 451260.00 "EET E 465177-00 FEET N

TABLE XXII (Cont)

SPEED MINU UATA UEGREES (TA) DIRECTION SPEED OF UNDUS . KNUTS GM/ CUBIC METER **UENSITY** KEL.HUM. PERCENT AILLIBAKS DESREES CENTISRADE TEMPEKA TUKE PRESSURE GEUMETRIC ALTITUDE MSL FEET

1.000064 ..000058 . 000005 -0000089 Sennon. .0000060 ....... ....... -00000 PLOODO. .. 000007e -100001-. 1000069 .unnoos 1-0000067 -000000-....... .. 000050 .. 000055 +50000-1 .. 0000075 1-000072 ....... ERMOND. - 000082 ....... .. 000053 .00000 1-00005 REFAACTION 34.5 30.8 33.04 36.04 37.5 36.0 31.0 20.4 23.4 17.1 13.8 5.2 7.0 9.6 11.4 31.2 20.4 13.7 14.0 190.5 170.4 199-6 196.0 197.9 1967 3000 5-691 191.0 201.0 199.0 187.5 0-86 99.3 115.5 25.0 193.5 40.6 188.1 80.4 199.7 200.8 4.90 595.3 592.2 2.69.0 572.8 571.5 569.0 9.659 0.685 547.3 584.0 577.3 570.3 562.7 557.1 590.6 575.0 574.1 561.1 382.4 580.7 303.4 501.9 558.0 565.7 566.5 565.2 564.2 354.3 253.4 386.6 276.8 264.8 405.8 249.5 980.0 173.4 6.591 999.69 336.3 312.0 305.9 563.9 283.3 282.5 345.2 333.5 324.6 313.2 C-467 273.7 259.1 243.7 238.4 393.2 148.2 4\*0.7 4.3\* 1.5\* -59.8 -63.4 -75.5 -41.9 -43.1 -45.0 9.65--63.8 -04.9 -39.4 -553.3 -44.3 6.94--45.5 -50.8 -52.0 -54.0 -55.8 -58.0 -60.0 -01.5 -62.5 -63.2 -05.5 -000--07.0 -57.7 -64.3 +080--48.2 -50.7 147.3 272.8 212.2 202.5 170.9 151.0 238.3 6.761 183.8 54.0 143.7 6.643 68.3 79.4 75.1 66.0 7.8C 261.0 255.3 249.6 232.8 227.5 222.3 217.2 1.70 40.1 45500.0 40500.0 0.0051 44500.0 47500.0 35000-0 35500.0 37000.0 37500.0 38000.0 39500.0 42500-0 43500.0 45000-0 46000-0 46500.0 34500.0 36000.0 36500.0 38500.0 39000-0 400000 41000.0 42000.0 43000.0 44000.0 47000-0 48000.0 34000-0 48500.0

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051,00 FEET			E	MOT
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5	SEGU LOTS		12.1	6	o.	4	"N	8	.0		mar.	*	13.7	.0	2	9	-	-	6	1.0	-		٥	4.3	4.3	0 M - 4	0 M - 0 4	0440 0440	249494 20464	0440HBH	40000000000000000000000000000000000000
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4	SPEED OF	555.7	U	54	553.8	54	34	3	. 554.8		S	5	5		2	558.2	59.1	6.65	560.8	9-19	502.2	567.3°	1	562	562.4	562.4	562.5	20000000000000000000000000000000000000	222222 20222 20222 20222 2022 2022 202	20000000000000000000000000000000000000	4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
4	GM/CUBIC METER	27.0	22	5	12	60	-	96		185.2		175.6	72	167.3		158.1	153.7	4	145,3	141.3	137.5	134.1		130.8	0	014	0-4-	0 - 4 - 0	0 - 4 - 0 0	0 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	KEL-HUM. PERCENT																											184	1977	12.1	2 4
	TEMPERATURE R DEWPOINT EES CENTIGRADE																									2 3					
	TENP AIR DESAEES	-69.5	- 70.0	-70.5	-70.9	- 70.7	-70.5	-70.3	-70.2	-70.0	- 49.64-	0.69-	-68.4	6.89-	-64.3	-67.6	-67.0	-66.4	-65.7	-65.1	1.40-	-04.6	- 44 5	1	-644.5	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	PRESSURE MILLIDARS	133.1	129.6	126.5	123.3	120-2	117.2	114.3	111.4	100.0	105.6	103-2	100.6	1.96	95.0	93.3	71.0	25.7	80.5	*****	82.3	00.3	78.3		76.4	76.4	76.4	76.4	76.4 72.7 72.7 70.9	76.4 72.7 72.7 70.9 69.2	7.5.0 7.0.0 7.0.0 6.0.0 6.0.0
6	HOMETRIC ATITUDE ISL FEET	19000-0	49500.0	50000-0	50500-0	51000-0	51500-0	52000.0	52500-0	53000.0	53500.0	54000.0	54500.0	55000.0	55500.0	56000-0	56500.0	57000.0	57500.0	58000.0	58500.0	59000.0	59500.0		D. Othing	0.0000	60000.0 60500.0 61000.0	600000.0 60500.0 61000.0 61500.0	600000.0 60500.0 61000.0 61500.0	600000.0 60500.0 61000.0 61500.0 62500.0	60000.0 60500.0 61500.0 62000.0 62500.0

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STATION ALT	ITUDE 40!	51.00 FE	IT MSL	•	1920333361	101		NOTA SI	L COURDINATES
11 JULY 70 3240 HRS MOT		0240 HRS	MOT		JALLEN		7	45	1560.00 FEET =
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					TABLE XXII (Cont)	(Cont)			
GEUMETRIC PRESSURE	PRESSURE		TEMPERA TUKE	KEL. HUM.	KEL-HUM. DENSITY SPEED OF	SPEED UF	AIND UATA	ATA	INCEX
ALTITUDE		AIA	DEMPULNT	PERCENT	GM/ CUBIC	CNCOS		SPEED	T
MSL FEET M	ILLIBAKS	DEGREES	MSL FEET MILLIBARS DEGREES LENTIGRADE		METER	KNUTS	DEGREES(TN) ANDTS	KNUTS	REFLACTION

GEUMETRIC	PRESSURE	TUE	TEMPERA TUKE	KEL - HUM.	<b>UENSITY</b>	SPEEU UF	TAU UNIX	•	LNCHX	
ALTITUDE			DEMPULNT	PERCENT	GM/ CUBIC	3		SPEED	4	
MSL FEET	MILLIBAKS	S	CENTICRADE		METER	KNUTS	DEGREES(TN)	-	REFLACTION	
0.00049	62.8	-60.3			(4	568.1	102.3	26.7	1.000023	
6.4500 .J	01.	-58.3			8 . EE	0	100.5	26.6	1.000022	
0.5000.0		-54.3			6. 36. 5	570	999.0	9	.0000	
65500.0		-57.3			194.2	572	0.66	-	-00002	
0.00099		-56.9			1 - 191. B	-	1.66	2	.00002	
66500.0		-56.0			d. 683.	572	9.66	1		
67000.0	54.3	-56.6			4.18	573	6.96	0	.00001	
0.750U.U		-50.4			65.63	573.	£ . 63. °	-	.00001	
68000		-56.5				573.	95.4	~	.00001	
68500.0		-50° U			-	573	2.46.	*	. Oucul	
69000		-55.8			J.	574	96.1	In		
69500.0		155.6			1	574	6.76	3		
70000-0		-55.4			\$ No.	574	6.86	N		
70500.0		-55.2			130	574	100.0	29.8		
0.00017.20		-55.0			2.50	575	6.66	27.3		
		-54.8			1,20	575	R. 46	24.7		
72000-0		-54.0			-	575	96.3	22.6		
72500.0		-54.4			7.65.7	57	89.2	21.5	1.000015	
73000.0		-54.2				576	1.28	20.2		
73500.0	g	-54.0			9	576	1.38.7	21.5		
74000.0		-53.B			50	576	1.92	23.3		
74590.0		-53.0			-	577	£ 91	25.0		
75000-0		-53.4			59.0	577	70.7	2	1.00001	
75500.0	1 56.3	-53.2			5 × 57 .5	2.172	0.620 4	28.3		
Toudu.		-53.0	20 20 35	~	F1255.1	577		N da A	1.00001	
76500-0	34.	-54.7		S # 10 10 - 0 - 0 - 0	B. 48 . 34.	578	85.7	30.4	1.00001	
77000-0		-52.3			53.4	578	89.5	31.2	TOOOL	
77500.0	33.	-51.0			2:3	57	0.16	31.0	1.00001	
78000	32.	-51.4			ı	519	4.16	32.2	1.00001	
78500.0	31.0	-51.0	*		25 63 JA	580	61.6	7		
					of the Copy of	***************************************				
				101		E. 17:				

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S MOT	4
ALTITUDE 4051.00 FEET MSL	
ALTITUDE 70	N NO. 361
STATION ALTITU	ASCENS ID

		UPPER AIR DATA	TA
ITUDE 4051.00 FEET	U FEET MSL	1920030361	MSL 1920930361 mSTW SITE COUNDING
0- 361	ş	TABLE XXII (Cont.)	We We will with the French to State on Fee (Cont.)
PRESSURE	TEMPERATUR	TEMPERATURE REL-HUMS DENSITY SPEED OF	EED OF MIND DATA STORY

GEUMETRIC AL LITUDE	PRESSURE	TEM	TEMPERATURE R DEMPOS	TUKE IF DI NT	REL-HUM.	GM/CJBIC	SPEED OF	DIRECTION	DATA	INDEX	
MSL FEET	HILLIBAKS	ш	S-CENTIGRA	LIGRADE	7. 7	METER	KNUTS	DEGREESCIN	KND	KEFRACTION	
79000	30.9	-50.5		6		- 64	3 581.0	9156	32.00	1.000011	
79500.0	•	-50.1		12.	竹をす しかけ	• 1 9 G × 5	1 581.6	91.2	31.5	1.000010	0
800000	29.5	9.64-		12	1 to 1	-93	10	90.06	31.0	1.000010	
80200.0	26-8			Service Services	Property of the second	- 55	20	å.	32.9	1.000010	•
81000.0	787	9.84-	<i>y</i>		1	43.	_	84.2	34.8	1.000010	
81500.0	27.5	6	437	+	4	. 45.	6 583.9	2	36-3	1.000009	
82000.0		6-24-	0 8	44	10-	41.	5 584.4	84.0	37.0	1.000009	
82500.0		4.24-		*	43	3	82	64.3	37.6	1.000009	
83000-0		2			10000000000000000000000000000000000000		9	Â	38.8	1.000009	
83500.0	25.1	-46.6	-		No.	33.	5 9	0	40-8	1.000009	
84000.0	24.5				1 1	37.	9	. 1-98	42-8	1.00008	
84500.0		-45.7			5 m	36.	7 547.3	.0-68	43-1	1.000008	
65000.0		-45.2		₹.			n	9006	42.2	1.000008	
85500.0		6.44-		in the second			in A	92.3	44-3	1.000006	
0.00098 2		1.44-			Şun	-	12	1	4.1.2	1.000008	î
	21.9	-44.0				m	吃	92.5	4-1-4	1.000007	
0.00072	21.4	144.5				32.	at A	4	41-7	1.000007	
87500.0	20.9	+ - 44- 4				31.	9- 588-9	5 92-3 s	41.1	•	
88000.0	20.5	-44.3				31.	Fine.	2.3	40-1		
88500.0	20.0	1.44-				33.	4 509.3	92.3	39.0	1.000007	
89000.0	19.0	0-44-				23.		93.0	38.6		
89500.0	19.1	6-64-				29.	1 589.0	7-46		1.000000	
90000	18.7	-43.B				23.	1.549.7	95.5°	39.5	1.000006	
50560.0	18.3	-43.6				27.	6.695 7	日本 一日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	THE STA	1.000006	
91000.0	17.9	-43.5	-			. 27 -	1. 590-1	The state of the s	かー など しょ	1.00000	
91500.0	17.5	49.4				25.	5 590-2			1.00006	
92000-0	17.1	-43.3				25.	4-065 6			1.000006	
92590.0	Э	-43.1				25.	7			1.000006	- 44
93000.0	10.3	-43.0				24.	1 - 590.7			1.000005	
							er er		*** *** *** 2	100	nort.

STATIJN ALTITUDE 4051.00 FEET MSL II JULY 70 0240 HRS MDT ASCENSION NJ. 361

MANUATURY LEVELS 192033J361 Jallen

ASTA SITE COURDINATES 451560.00 FEET E 465177.00 FEET N

# TABLE XXIII

	21													٠												`. `~	
MIND DATA	SPEED	1.2xx	3.5XX	3.3	7.7	1.1.1	13.6	12.0	10.9	17.1	21.0	24.1	30.7	35.7	27.5	6.6	11.8	7.4	14.1	12.0	20.1	70-97	34.4	21.3	31.4	41.0	39.1
	DIRECTION DEGREES(TN)	349.2	328.4	276.7	284.5	248-8				192.3			197.7	167.9	198.8		118.0							19.1	91.1	66.3	6-26
REL-HUM.	PERCENT	29.	29.	33.	36.	45.	47.	40.	-97	23.	16.	41.	-07														
TEMPERATURE	DEMPOINT CENTIGRADE	6.6	3.3	2.1	-0-3	-2.B	6.9-	-11.8	-23.7	-30-3	-36.5	-35-3	サ・ハナー														
	AIŘ DEGKEES	25.7	23.0	18.6	13.B	8.5	3.4	-1.7	4.1-	-13.5	-17.8	-25.6	-34.2	7 - 4 4 -	-56.3	-61.5	-65.8	-10-1	4.69-	-64·p	-64.2	-50.5	-55.9	-54.0	-50.0	-46.5	-44.1
<b>EUPUTENTIAL</b>	FEET	4952.	6600	4542.	10447.	12477.	14029.	10925.	1 43 38.	22049.	24900.	28199.	<b>51805.</b>	35901.	4 Uc 7 t.	43427.	4652 4.	50110.	54406.	58890.	01569.	64702.	68494	73174.	79277.	83218.	88117.
PRESSURE SEUPUTENTIAL	MILLIBARS	854.0	800°	750.0	700.0	650.0	0.000	550.0	500.0	450.0	400.0	350.U	300.0	250.0	200.0	175.0	150.0	125.0	100.0	80.0	70.0	0.00	50.0	40.0	0.00	25.6	20.0
_	£																										

WIND DATA MAY BE INVALID DUE TO MISSING RAW ALIMITH AND ELEVATION ANGLES. XX

#### UNCLASSEFIED

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DOCUMENT CONTI	ROL DATA - R	La Orași san e ante e m							
(Security classification of title, body of abstract and indexing a	nnelation must be a	atored when the c	versil report is classified;						
I. ORIGINATING ACTIVITY (Corporate author)	M. REPORT SECURITY CLASSIFICATION								
U. S. Army Electronics Command	UNCLASSIFIED								
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S. REPORT TITLE									
Athena V-123-D, Flight 122									
4. DESCRIPTIVE NOTES (?) po of report and incluse a dates)									
5- AUTHOR(S) (First reme, middle initial, last name)									
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John M. Sharpa									
S. REPORT DATE	TOTAL NO. O	F PAGES	75. NO. OF REFS						
August 1970	63		4						
M. CONTRACT OR GRANT NO.	SA. DRIGINATOR	REPORT NUMB	ER(S)						
b. PROJECT NO.	DR-540								
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Sciences Laboratory, White Sands Missile Range, New Mexico.									
11. SUPPLEMENTARY NOTES	12. SPONSORING								
			onics Command						
	. Atmosphe	eric Scienc	es Laboratory						
	White Sands Missile Range, New Mexico								
13. ABSTRACT									

Meteorological data gathered for the launching of Athena Flight 122, Vehicle V-123-D, are presented for the Air Force Space and Missile Systems Organization and for ballistic studies. The data are presented in tabular and figure form.

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Security Classification

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